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MEDICAL ANNALS
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VOLUME XVII — *January, 1948* — NUMBER 1

EXPERIMENTAL TRENDS IN ANTIBIOTICS[*]

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IT IS obvious that most contemporary investigations in the field of bacterial antagonisms are being directed toward the discovery of the completely ideal antimicrobial agent. Such a material would include the following features: It must be of a chemical structure that is easy to either synthesize or extract from the manufacturing microörganism; it must have a wide range of antimicrobial action, exerting an effect upon the whole bacterial spectrum of infectious agents, including viruses, rickettsiae and pathogenic molds and fungi; it must have pharmacologic properties that ensure simple, i.e., nonparenteral, administration, and no toxicity to the host's cells or to his ability to produce defense mechanisms; it must be slowly excreted so that it will effect a complete eradication of the parasite in a short period; and, finally, it must not permit susceptible organisms to become resistant to its action.

The term "antibiotic" is a new description of an old observation. Dr. Waksman coined the term a few years ago, and his restrictive definition allows the inclusion of only those chemical agents of biologic origin which are involved in bacterial antagonisms. Actually, the term "antibiotic" is not a good one, since by derivation it means "against life." Antibacterial or antimicrobial are better terms, meaning, respectively, against bacteria and against microbes. The latter, of course, covers the entire gamut of pathogenic microörganisms and in recent months has become the popular adjective describing the commonly used materials, penicillin and streptomycin. These terms must be distinguished from "antiseptic." Any material, although possibly from a similar origin, which acts by denaturing proteins, and thus becomes a general protoplasmic poison, is not, by definition, an antimicrobial agent and does not fall into the group of chemotherapeutic substances under consideration.

During the past few years great emphasis, possibly too great, has been placed on microorganisms as sources of agents capable of combating infections in the human. It must be kept in mind that the production of antimicrobial substances is not an exclusive attribute of microorganisms. Chemotherapeutic agents such as quinine and emetine, of plant origin, are as effective agents for specific purposes as are penicillin and streptomycin. The previously described therapeutic utopia thus need not be antibiotic, it may well be of chemical or biologic origin. But an antimicrobial agent it must be.

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[*] Read at the Eighteenth Annual Scientific Assembly of the Society, October 8, 1947.

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Chemotherapy in general and bacterial antagonism in particular are not recent scientific innovations. Pasteur in 1877 described the inhibiting effect upon growth of anthrax bacilli in urine contaminated with air organisms. Ehrlich demonstrated the efficacy of organic arsenicals against Treponema pallidum in 1909; and Fleming's original observation that a contaminating mold caused the disappearance of gram-positive bacteria from a culture medium was made in 1929. These are chemotherapeutic observations, and some of the agents described are still useful. The point to be stressed, of course, is that chemotherapy is not new; only the novel terms and matchless publicity are modern.

In recent years there has been added one important impetus to this rapidly expanding science of chemotherapy and antimicrobial therapy. As against the isolated studies of Pasteur and Ehrlich, present-day investigations, both clinical and laboratory, are organized, coöperative, mutually beneficial, and far more productive. Because of the keen perspective of great researchers like Waksman and, particularly, DuBos, wide vistas in the field of bacterial antagonism and chemotherapy have been opened to all, and free exchange of information, ideas, and problems have enabled the science to progress with unbelievable strides during the past 7 years. As examples of this coöperative trend, many chemotherapeutic agents have been described, and the most recent information about each is available; for example:

1. Bacitracin is an antibacterial substance derived from actively growing cultures of a subtilis bacillus, originally found as a contaminant in a compound, comminuted fracture in a child. It has a wide bacterial spectrum, including all gram-positive organisms and a few gram-negative ones. It is slowly excreted but may have kidney toxicity when administered parenterally to the human.

2. Grisein is a first cousin of streptomycin and is produced by Actinomyces griseus, a soil organism. It is active against acid-fast bacilli *in vitro*, and against streptomycin-resistant ones. Its toxicity in the human is unknown at this time, because there have been no clinical studies of its pharmacology.

3. Tomatin is cultivated and harvested from a species of tomato plant. Its antifungal effect is striking and includes blastomycosis, histoplasma, coccidioides, and other mycotic pathogens.

4. A substance from Spanish moss apparently has tuberculo-static properties.

In addition to these there are an inestimable number of pure chemical compounds which have received attention. Among them are:

1. 4'4' diamino-diphenyl-sulfone and its many derivatives, which are still under study for leprosy and other infections caused by acid-fast bacilli.

2. Para-amino-salicylic acid, which has received some study because of its effect upon the tubercle bacillus, particularly in combination with streptomycin.

Of more practical and immediate importance to the clinician, however, is the problem of learning more about the agents presently available. The search for the newer agents must be left with those few investigators who have the proper laboratory facilities for such researches. To the student of infectious diseases, knowledge concerning modes of action and precise definitions of the place in therapy that each of many now deserve is far more pressing than the possibilities of some future material. The trend in antibiotics today thus entails extensive studies, and often tedious ones, to determine mechanisms of action that agents exert upon susceptible organisms and upon host cells, deleterious to one and not the other. The most important of these, and the first that requires attention, particularly by the clinician, is the most obvious one. It is useless to consider any substance as an antimicrobial agent, regardless of its *in vitro* antibacterial spectrum, unless it is active against at least 1 infectious disease *in vivo*. As an outstanding example of this is the case of streptothricin. Following its isolation by Waksman, about the time that streptomycin was first described, streptothricin proved to be more active against the tubercle bacillus *in vitro* than was streptomycin. However, in the study of guinea-pig tuberculosis it failed to offer any significant protection to the animal and, thus, as an antimicrobial agent it failed.

The cardinal theory in successful antimicrobial therapy—the theory which signifies that "X" agent is good therapy for "Y" disease in the human—is that the invading microörganism be sensitive *in vivo* to the antimicrobial material employed. Furthermore, for rational therapeusis, some knowledge should be possessed of the amount of the antibiotic needed to inhibit growth of the infecting parasite within the host and the blood levels to be expected with various-sized doses of the material. Antimicrobial agents have only the power to suppress the growth of the infecting organisms. They are bactericidal in only relatively minor degrees. As long as the organisms remain static, however, and are thus incapable of further infectivity, the host is afforded the opportunity to cope with them. Eventual success of treatment thus depends as much upon the host's mechanisms of defense and repair as upon the agent's bacteriostatic abilities.

In itself, the problem of host resistance is receiving attention. Physicians who treat infectious diseases recognize the not infrequent occurrence of unexplained chemotherapeutic failures. Although the successful management of the majority of acute infections is expected and has made the physician interested in infectious diseases quite sophisticated, his occasional complete flop emphasizes real lack of knowledge concerning the host itself. As an example of this, a young boy aged 5 had had recurrent bouts of cutaneous abscesses, caused by Staphylococcus aureus, for 4 years, necessitating a total period of 42 months' hospitalization. His early treatment consisted of penicillin, which with surgical drainage produced satisfactory remission of each bout. However, it was noted in the laboratory that on each succeeding relapse the causative organisms became increasingly resistant to penicillin. Eventually they became so resistant that penicillin proved ineffective. Fortunately streptomycin could be successfully substituted as the specific antimicrobial therapy, and on 3 occasions it worked beautifully. Then the staphylococci began to show resistance to streptomycin. It could be predicted that when streptomycin failed to control the organisms the boy would undoubtedly relapse, and without specific help would develop an overwhelming staphylococcal sepsis and die. At that point, the boy's mother received great quantities of staphylococcus toxoid produced from her son's organisms, with the hope that she would be stimulated to form specific antibodies against the boy's organisms. Following this, the boy was given maternal transfusions. Since he had shown no ability to form his own antibodies, his mother did it for him, because that therapy apparently produced a remission of the infection in the child, and he has had no recurrence for the past 9 months—a relapse from infection for a period never before observed. Actually this is an unusual result, but it points up the fact that more knowledge about host immunity is paramount. Until we learn it, our chemotherapeutic successes will continue to be marred by occasional failures.

Since there is so little than can be done at this time to enhance specifically the organization of these forces in the host, it becomes imperative that the other variables be managed as efficaciously as is feasible to ensure as good a result as is possible, i.e., proper dose, duration of treatment, and routes of administration of the antibacterial agents.

Ideal time-dose relationships are imperfectly understood, but since the advent of penicillin some advances toward the satisfactory explanation of proper dosage have been made. It is not recognized whether penicillin, or streptomycin for that matter, exerts its antibacterial action more effectively, or, at least, as well, when present in high concentrations in the blood for relatively short periods or whether more prolonged concentrations at lower but still effective levels is the more ideal method of therapy. For example, the case of streptomycin in the treatment of tuberculosis can be cited. From animal and human experiments it appears that constantly effective blood concentrations of the drug are not necessary. In the human a total daily dose of 1.0 gram will apparently accomplish as much therapeutically when administered in 5 or 6 doses of 0.2 gram 4 hours apart or as 2 half-gram doses 12 hours apart. In many other infections this same observation has been borne out by clinical testing. It would seem, consequently, that safe treatment of an infection in the host might well be accomplished by the maintenance of effective blood levels for only a fraction of each day.

On the other hand, because of the long-held notion that blood concentrations should be constant at all times for adequate chemotherapy, many studies are continuing with the aim of permitting easier administration. For example, to overcome the disadvantages of frequent injections, because penicillin and streptomycin are excreted rapidly, combinations of these agents with a variety of foreign materials have been effected with the design of either prolonging absorption or of delaying excretion. This has been true particularly in the case of penicillin. A combination of this material with oil and beeswax accomplishes this end. Recently there has been described a procaine salt of penicillin which prolongs absorption to an even greater degree. A single dose in an aqueous solution of this salt will provide blood concentrations for from 24 to 36 hours (following an injection of 300,000 units), and when suspended in a simple organic oil, will result in high levels for at least 48 hours. For the same purpose of prolonging concentrations, but utilizing another pharmacologic principle, penicillin given with a caronamide will maintain detectable levels for many hours beyond the time that would be expected following its administration in an aqueous solution alone. The caronamide competes with penicillin at the kidney tubule, and in this way delays its excretion. If the observation that prolonged blood serum levels are not required for effective antimicrobial therapy, then further studies along these lines will be, more or less, fruitless. It is interesting to note, however, the paradoxical situation that exists in present-day penicillin research, both investigations being dedicated to the same purpose—to provide the easiest but most effective method of administering the antibacterial agent.

A precise definition of dosage for the treatment of specific infections cannot be made with ease. As this is so, one well-known chemotherapeutic observation, exclusive of toxicity, will prevent overdosage. Manifest increases above effective levels in blood serum do not provoke significantly greater bacteriostatic activity from the antimicrobial agent. From recent experiences in the Veterans Administration study of streptomycin in tuberculosis, the parenteral administration of 1 gram appears to accomplish as much therapeutically as 2 grams similarly administered. Consequently great doses do not necessarily mean best dosage, and, as with intervals of administration, proper quantitative administration continues to require far more clinical evaluation before a final definition in all infections can be given. I do not wish to go on record as advocating single doses of an antibacterial material for the ideal therapy of any infection, acute or chronic. In fact, I highly recommend that, in the state of our present knowledge, the sensible course to follow is to maintain effective blood levels of the agent for at least a majority of the time each day. Effective concentrations can be defined as that amount of the specific agent in the host's blood serum which is appreciably greater, by 4 or 5 times, than the measured sensitivity of the infecting organism *in vitro*. Such a rcommendation may be changed next year. Furthermore, it would be best to administer the material at frequent intervals, regardless of the disadvantages to the patient and physician, until the above theory is better substantiated by both *in vitro* and *in vivo* studies. The problem is mentioned only to illumine the present clinical investigations.

Similarly, ideal duration of treatment cannot be defined accurately for any infection. In some the host will develop his own defenses in short order, and specific therapy can be discontinued when they bcome effective. Evidences for them in acute infection are easily recognized—by fall of temprature to normal, a reduction in the white blood cell count, a slowing of the sedimentation rate, and by other measurements. In the case of gonococcal or pneumococcal infection, relapse is avoided by a treatment regimen of a few days. On the other hand, in chronic or subacute infections, such as tuberculosis, these evidences of mobilized immunity are not easily recognized and the duration of treatment consequently must be empirical. It is known, however, that the response is slow in these illnesses and that treatment of necessity must be prolonged. The sole purpose of successful antimicrobial therapy is the avoidance of clinical relapse by properly outlining and administering that therapy. It should be remembered that in those diseases which require long-term administration the dangers of toxicity to the drug, the development of bacterial resistance, and other disadvantages of drug therapy will interfere with the obvious answer to this problem, i.e., indefinite continuation of therapy. Only with a wide knowledge of the antibiotic used, the characteristics of the infection, and the capabilities of the host to combat the latter and to be unharmed by the former, can proper therapy be outlined.

The problem of bacterial resistance has had particular and increasing attention focused upon it. Although far from being completely understood, a few facts are available. The decrease in sensitivity may be of two types: (1) A loss or reduction of sensitivity because the organisms learn to survive despite the antagonistic substance. They develop new enzyme systems or acquire other metabolic activities as substitutes for those which the antimicrobial drug interrupted. (2) A "weeding" out of susceptible strains, leaving only inherently resistant ones. The speed with which either of these takes place varies with different bacterial species. E. coli develops overwhelming resistance to streptomycin in a matter of days (6 to 8 transfers). Acid-fast bacilli, on the other hand, do not become resistant for many weeks of exposure. Once resistant, bacteria rarely revert to a susceptible species. When *in vitro* observations indicate resistance, antibacterial therapy *in vivo* is probably useless. One method to avoid the disadvantages of resistant organisms rests with the use of a second antibacterial agent or a combination of two. For example, streptomycin combined with grisein or para-amino-salicylic acid allows one to hope that acid-fast bacilli will either not become resistant with their combined use or that if resistant to one, the antibacterial effect of the other will circumvent the difficulty. Let me point out, however, that this is theory only and that there have been no crucial clinical tests that substantiate this particular point. Adjustment of dose to attain maximal therapeutic benefit is also, of course, of utmost importance in this problem.

There is one specific problem which is requiring attention in research today, namely, a rather unique toxic reaction of streptomycin. Long-term administration of streptomycin is accompanied by a singular and serious untoward side-reaction, that of a disturbance of eighth cranial-nerve function. There are other manifestations of toxicity, but they can be, literally, ignored, for, as with the sulfonamides, they are rare enough to be disregarded if proper indications for its use are present. The production of disturbed labyrinthine function cannot be. In a series of over 900 cases of tuberculosis treated in the Veterans Administration during the past 18 months, 90 per cent or more of the patients developed typical signs and symptoms of vestibular afunction. It appears that this will become a permanent disorder or a very long sustained one. The explanation of this phenomenon has escaped detection. Some believe streptomycin is a specific neurotoxin and acts upon the nuclei of the eighth cranial nerve in the brain, producing a sterile liquefying necrosis. Others, unable to find such pathologic changes, believe that the lesions are in the nerve terminals or in the labyrinth itself and interrupt the proper transfer of stimuli that normally provoke the balancing mechanisms to activity. Great efforts are being expended to learn more about this reaction and to find methods whereby it can be either avoided or prevented. At the present time, consequently, the physician must, irrespective of source or explanation, treat the patient with the knowledge that a neurologic defect will be an invariable sequela of that therapy. He must, with wisdom supplemented by common sense, recognize that the hazards of the disease being treated must exceed hazards of the treatment.

Finally, I should like to pay tribute to many men in many institutions, both governmental and civilian, for what I consider to be the most favorable and delightful current trend in medicine in general and antimicrobial therapy in particular. It concerns the study of streptomycin upon tuberculosis. The Army, Navy and Veterans Administration undertook a coöperative study that resulted in great and rapid advances in the therapy of tuberculosis with a specific chemotherapeutic agent. During the time when this coöperative investigation was proceeding, a group of civilian investigators began a similar program under the auspices of the American Trudeau Society. The grants-in-aid and the Tuberculosis Division of the United States Public Health Service also entered into this program. As a consequence of free exchange among all of ideas, results and problems common to all, a wealth of clinical information has been obtained in a period of 18 months. It is estimated that had individual and unsponsored small studies been the sole program of investigating effects of streptomycin in tuberculosis, a similar accumulation of data would have required at least 5 years. The program as performed was not socialized medicine, being completely voluntary in all respects. It merely represents what can be accomplished when far-sighted researchers join together in a common fight against a powerful enemy. It represents a significant advance in medicine and one in which I am proud to have had a small part.

An attempt has been made to point out some of the trends in antimicrobial therapy, current, past and future. Essentially, they are a concerted search for the ideal agent, or at least better antimicrobial agents and, of more immediate importance, a continuing study into the modes of action and biologic properties of those agents already in common use. It is as necessary to learn how to use effectively the many recently discovered antimicrobial materials, by accurately defining dosage, duration of use, mode of administration, toxicity, and the problem of bacterial resistance, as it is to await the development of new agents whose properties may be devoid of the disadvantages present in the existing ones. It was suggested that an ideal agent is being searched for. It must be emphasized that if one is discovered, it will not, by itself, achieve complete eradication of any infectious process in the human. Complete sterilization may be anticipated, but repair of inflamed and damaged tissue will remain in the province of the host to perfect. That agent, as streptomycin and penicillin do now, will only have the power to suppress the invading microörganism; the host must initiate and carry on with reparative processes. If the host cannot perform this function, therapy with antimicrobial agents will be fruitless.

PENICILLIN

A Review of the Basic Principles and Their Clinical Application*

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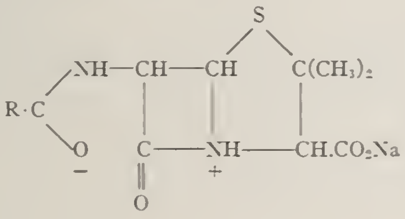
I. PROPERTIES

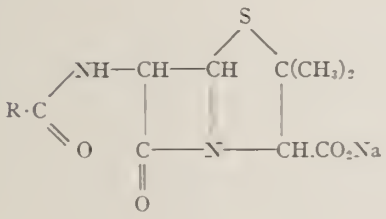
THE development of penicillin has been so phenomenal and its clinical applications so widely publicized, that many of the basic concepts necessary for the proper use of the antibiotic have been relegated to the background. These principles are reviewed.

Chemistry

What is penicillin as we know it commercially? Recently, the group of American and British chemists[1] commissioned to ascertain the chemistry of penicillin submitted the formula $C_9H_{10}O_4SN_2R$, with the structure thought to be one of the following:



or



Actually, the material designated as penicillin has been found to be at least 6 different substances. The basic radical is the same for all penicillins, the differences being in the radical indicated by R shown in the structural formulae. In table 1 are shown the 6 varieties of penicillin which have been adequately identified.[2] It is believed that the substance designated as penicillin K may actually contain additional penicillins.[3] Recently Du Vigneaud and his coworkers[4] have synthesized minute quantities of G penicillin. Penicillins F, G, K and X have been prepared in the crystalline form.

A comparison of penicillins F, G, X and K has shown that penicillin F and G are similar pharmacologically and in their antibacterial activity. In equivalent doses administered parenterally penicillin X has been found to produce significantly higher and longer sustained concentrations in the serum than penicillins F and G. Penicillin K, on the other hand, remains in the blood stream for a shorter period of time than the other penicillins after parenteral administration. Urinary excretion was found to be prolonged and the total amount recovered less with penicillin X as compared to F and G. Penicillin K is excreted in the urine for the shortest period of time, and the amounts recovered are less as compared to the other penicillins. Two theories have been advanced to explain the relatively poor antibiotic activity of penicillin K. One theory is that it is readily destroyed in the body[5]; and the other is that the amount bound to proteins, in which state it is inactive, is greater than with the other penicillins. Although Chow and McKee[6] have reported a penicillin-albumin combination to be therapeutically active, more recent work has shown that penicillin bound to protein is inactive.[3]

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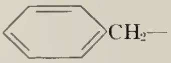
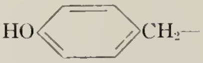
Meads and his associates[7] have reported that penicillin X is not absorbed as well as penicillin G after oral administration and, consequently, the blood concentrations are not as high or maintained as long. Penicillin K has been shown to be absorbed more rapidly than G from the gastrointestinal tract and to result in higher average peak plasma concentrations.[8]

TABLE 1

Types of Natural Penicillin

NAME	SYNONYM	R—	
F	I	Δ^2-pentenyl	$CH_3CH_2CH{=}CH\ CH_2$—
Dihydro F	Gigantic Acid	N-amyl	$CH_3CH_2CH_2CH_2CH_2$—
Flavicidin or Flavicin	F Type	Δ^3-pentenyl	$CH_3CH{=}CH\ CH_2CH_2$—
G	II	benzyl	
X	III	para-hydroxybenzyl	
K*	IV	N-heptyl	$CH_3CH_2CH_2CH_2CH_2CH_2CH_2$—

* May contain 2 additional penicillins.

most likely explained by the greater antibacterial activity of the penicillin X.

Actually, clinically there is little or no difference between penicillins F, G and X. This is undoubtedly explained by the fact that differences in sensitivity of the bacteria to the different penicillins are so small that with the doses of penicillin administered clinically the levels in the blood are bactericidal regardless of the penicillin employed. In spite of the possible advantages of penicillin X, this penicillin is not now produced commercially, since only relatively small amounts are obtained in the growth of the mold, and then only under special conditions. Commercial preparations contain only minute amounts of penicillin X because the facilities required for its production are not employed. In the production of penicillin, every effort has been made to minimize the amount of penicillin K by the addition of precursors which favor the production of penicillin G to the media. Commercially there are available crystalline, crystalline G and amorphous penicillin preparations. According to the Penicillin Regulations promulgated by the Food and Drug Administration, the crystalline and amorphous preparations cannot contain more than 30 per cent penicillin K, and crystalline G must contain not less than 85 per cent by weight of G penicillin. The strains of

A majority of bacteria have been found to be 2 to 8 times more sensitive to penicillin X than G *in vitro*. Both of these penicillins are usually several fold more effective than penicillin K.

Dowling, Hirsh and O'Neil[9] have shown that increasing the resistance of bacteria to either penicillin G or X *in vitro* resulted in an increase in resistance to the other penicillins. Similarly, bacteria which became resistant to penicillin G *in vivo*, as a result of inadequate therapy, were found to have become more resistant to penicillin X. If an infection is treated inadequately with one penicillin and the causative organism becomes resistant, treatment with another penicillin in the same dosage has been unavailing in our experience. Flippin and his co-workers[10] have reported a case of subacute bacterial endocarditis in which the infecting organism had become highly resistant to penicillin G, but in which success was achieved with penicillin X. This is the penicillin molds employed in the United States produce only small amounts of F penicillin.

Of the 9 different salts of penicillin that have been prepared, at least 6 have been found to be useful clinically, but only the sodium, calcium and potassium salts are available commercially at the present time. The sodium and potassium salts have been prepared in crystalline form, whereas calcium penicillin is amorphous. All 3 of these salts of penicillin are essentially alike in their antibiotic activity, pharmacologic properties, and clinical toxicity and efficacy.

In recent years, many commercial producers have discontinued amorphous penicillin in favor of the purer crystalline penicillin material. There is evidence, however, that the material which is discarded in the preparation of the crystalline penicillin from the amorphous material enhances the activity of crystalline penicillin. The substance or substances responsible for the antibacterial activity in the discarded material have not been identified, although the nature of the material is under investigation. At present it appears that it is not another penicillin.

Clinically there may be advantages to crystalline penicillin over the amorphous material. It has been found that crystalline penicillin is less painful on injection and may cause fewer general reactions. When prepared in beeswax and peanut oil, the levels in the blood are sustained somewhat longer with crystalline than with amorphous penicillin.

STABILITY

There are numerous preparations of penicillin available commercially. These have been reviewed recently by Putnam.[11] Penicillin is a relatively stable substance, provided it is kept properly. The various products and their stability are listed in table 2. Stability is maintained if the pH of the medium is between 5 and 7.

POTENCY

Penicillin is measured in units. The present unit, as established by international agreement, is the specific penicillin activity contained in 0.6 microgram of a designated specific lot of crystalline sodium benzylpenicillin (penicillin G or II). One milligram of the international standard penicillin is equivalent to 1,667 units. In other words, 60 milligrams or 1 grain is equivalent to 100,000 units.

METHODS OF ASSAY

All of the methods of assay in general use are biologic tests which depend upon the inhibition of growth of a microörganism in culture medium containing the material to be tested, compared with the inhibition obtained by a known quantity of a standard preparation. The two methods most commonly used in clinical work are the serial dilution and the cup-plate methods. The latter is based on the principle that when penicillin is allowed to diffuse through an agar plate which has previously been seeded with the test organism, a zone of inhibition appears. The larger this zone, the greater the potency of the penicillin tested.

The serial dilution method consists of setting up a series of dilutions of a penicillin solution of unknown strength and a similar series from a standard penicillin solution, adding to both a culture of a penicillin-sensitive organism, and comparing the ability of the two solutions to inhibit growth of the organisms.

SOLUBILITY

The salts of penicillin are extremely soluble in water and body fluids, whether they are in crystalline form or are present along with impurities as in the amorphous preparations.

INACTIVATION

Although penicillin is inhibited by a variety of substances, the most important is penicillinase, which is an enzyme originally isolated from ground suspensions of Escherichia coli by Abraham and Chain.[12] This substance has since been isolated from many other bacteria. It has been demonstrated that penicillinase is produced by both penicillin-sensitive and penicillin-resistant organisms. Recently the substance has been crystallized.

Dowling and Hirsh[13] have shown that the inactivation of penicillin is quantitative and immediate. Sufficient penicillinase should be added to assure complete inactivation of the penicillin anticipated to be present in the body fluid. The practical value of this material is that when added to culture media it will inactivate any penicillin present in the specimen to be cultured. With the addition of penicillinase to culture media, false negative culture results are practically eliminated and the isolation of the organism facilitated. Its effect is similar to the use of para-aminobenzoic acid in culturing body fluids which contain sulfonamides.

Unlike the sulfonamides, penicillin is not appreciably affected by pus, tissue autolysates, whole blood, serum or peptones.

It has been found that heavy metals such as copper, lead, zinc, cadmium, mercury and uranium destroy the antibacterial activity of penicillin. Consequently these metals should not be used in containers for the production of, or for dispensing the antibiotic. Since penicillin is inactivated by oxidizing agents, such as potassium

TABLE 2

Stability of Various Penicillin Preparations

PENICILLIN PRODUCT	STABILITY	
	Room Temperature	Refrigeration
Crystalline Sodium and Potassium	36 months	Not necessary*
Amorphous Sodium and Calcium	May deteriorate	18 months
Crystalline in Solution[†]	Not advisable	3 days
Amorphous in Solution[†]	Undependable	7 days
Buffered Crystalline in Solution	Undependable	7 days
Crystalline in Wax and Oil	18 months	Not necessary
Amorphous in Wax and Oil	12 months	Not necessary
Buffered Tablets Crystalline[‡]	18 months	Not necessary
Buffered Tablets Amorphous[‡]	12 months	Not necessary
Tablets Crystalline for Aerosol	36 months	Not necessary
Tablets Alum Precipitated with Sodium Benzoate	12 months	Not necessary
Capsules with Pectin Hydrolysate	12 months	Not necessary
Crystalline with Aluminum Hydroxide Gel	36 months	Not necessary
Amorphous with Aluminum Hydroxide Gel	May deteriorate	18 months
Ointment	Unstable	9 months
Troches	Undependable	9 months
Troches—Chewing	Undependable	9 months
Crystalline Dental Cones With or Without Sulfonamides	18 months	Not necessary
Amorphous Dental Cones With or Without Sulfonamides	12 months	Not necessary
Crystalline with Vasoconstrictor for Sinus Instillation	36 months	Not necessary[§]
Amorphous with Vasoconstrictor for Sinus Instillation	May deteriorate	18 months[‖]
Surface Application	8 months[¶]	12 months[¶]
With Sulfonamide Powder	Unstable	9 months
Vaginal Suppositories	8 months[¶]	12 months[¶]

* For all products where it is not necessary to refrigerate, this procedure will prolong potency.

[†] Either distilled water, isotonic salt solution or 5 per cent glucose solution.

[‡] Must be protected from moisture.

[§] After the penicillin is mixed with the vasoconstrictor it will maintain potency for 3 days providing it is kept in the refrigerator.

[‖] After the penicillin is mixed with the vasoconstrictor it will maintain potency for 7 days providing it is kept in the refrigerator.

[¶] Tentative.

permanganate and hydrogen peroxide, and by most organic bases, such as the aniline compounds, these agents should not be used concurrently with penicillin locally.

Solutions of penicillin may be mixed with solutions of streptomycin and procaine without deleterious effect.

ANTIBACTERIAL ACTIVITY

One of the most remarkable properties of penicillin is the wide range of microörganisms against which it is effective. As a general rule, it has been found that penicillin is highly active against gram-positive bacteria, regardless of whether the microörganisms are aerobic or anaerobic, and relatively ineffective against gram-negative bacteria, except for the Neisseriae group. In addition, it has been found to be highly effective against members of the spirochetal group, Spirillum minus, Erysipelothrix rhusiopathiae, and some strains of Actinomycosis. The literature on the effect of penicillin on the leptospiral organisms is confusing. Recently Chang[14] made a comprehensive study of the action of penicillin on these organisms *in vitro* and *in vivo* and concluded that penicillin was leptospirostatic rather than leptospiricidal and, furthermore, that the therapeutic effect of penicillin in leptospirosis in guinea pigs depends on its administration before the liver is seriously damaged and jaundice appears. This report not only reconciles the discrepancies of the previous studies, but is in agreement with clinical results. Although penicillin has been thought to be highly bactericidal for the *Streptobacillus moniliformis*,[15, 16] recent work indicates that it may not be effective against all strains.[17] Although penicillin is ineffective against viruses in general, the apparent susceptibility of the ornithosis and psittacosis viruses may be explained by the fact that these microörganisms are among the larger viruses, and some of their properties are similar to bacteria. In table 3 are listed the organisms known to be either highly susceptible or relatively resistant to the action of penicillin.

The effect of penicillin on various bacterial toxins have been studied by several investigators. Penicillin has no effect on the formation of staphylococcal alpha-toxin, and neither enhances nor destroys the pre-formed toxin.[18] Neter[19] has shown that penicillin mixed with tetanus toxin did not protect mice from death. Dowling and Hirsh[20] have demonstrated that penicillin failed to neutralize Dick and Schick toxins, and that mixtures of penicillin and Dick and Schick toxin elicited positive skin reactions in susceptible persons. Ercoli and his associates[21] claimed, however, that penicillin neutralized the diphtheria toxin *in vitro* but was ineffective in protecting guinea pigs from the lethal action of incompletely neutralized diphtheria toxin. Miller and his coworkers[22] have reported that in mice large subcutaneous doses of penicillin repeatedly administered exert a considerable degree of protection against the lethal action of preparations of both meningococcal and gonococcal endotoxins and the endotoxins of some gram-negative bacilli. They have not been able to reproduce their results in *in vitro* studies, however. Dixon[23] has reported that penicillin inhibits fibrinolysis by penicillin-sensitive fibrinolytic strains of Staphlococcus aureus. One of the factors in the therapeutic efficacy of penicillin in staphylococcal infections may be in its ability to prevent the dissolution of fibrin which serves as a barrier to the spread of the infection.

EFFECT UPON HOST

Penicillin, in the concentrations which are likely to be used therapeutically, does not affect the action or migration of leukocytes, macrophages, or fibroblasts. Whether it influences the development of antibodies is still unsettled. There is evidence to indicate that untreated animals who survived an infection with pneumococci were more resistant to reinfection with the same type of pneumococcus than those previously treated promptly for short periods with penicillin. It appears that penicillin does not interfere with the formation of antibodies, but aborts the disease promptly so that the antigenic stimulus is lost.

absorbed by the bacteria in the process of bacterial inhibition.

Under ordinary conditions penicillin is active only against actively growing and dividing bacteria or those capable of multiplying. In fact, the more active the growth and multiplication of the strain, the more prompt and effective is the action of penicillin. Furthermore, anything which enhances the growth of the bacteria, such as serum, para-aminobenzoic acid and dextrose, increases the rate at which penicillin acts. Conditions which decrease the rate of growth decrease also the rate at which penicillin acts. The effectiveness of penicillin is increased as the acidity of the medium is increased and decreased as the medium is made alkaline. Hobby and her associates[24] have shown that the rate of killing of the antibiotic on several strains of pyogenic bacteria increased by geometric proportions as the time increased arithmetically. Within 4 to 6

TABLE 3

Sensitivity of Microörganisms to Penicillin

ALL OR MOST STRAINS SENSITIVE	PARTIALLY SENSITIVE OR SOME STRAINS SENSITIVE AND OTHERS RESISTANT	MOST OR ALL STRAINS RESISTANT
Staphylococcus	*Hemophilus influenzae*	*Aerobacter aerogenes*
Pneumococcus	*Hemophilus ducreyi*	*Escherichia coli*
Beta-hemolytic streptococcus	*Hemophilus pertussis*	*Eberthella typhi*
Most strains of alpha and gamma streptococci	*Actinomycosis*	*Salmonellae*
Gonococcus	*Corynbacterium diphtheriae*	*Streptococcus fecalis*
Meningococcus	Ornithosis and psittacosis viruses	*Shigellae*
Bacillus anthracis	*Clostridium botulinum*	*Brucellae*
Bacillus subtilis		*Klebsiella pneumoniae*
Clostridium perfrigens		*Pseudomonas aeruginosa*
Clostridium septicum		*Vibrio cholerae*
Clostridium tetani		*Pasteurella tularensis*
Streptobacillus moniliformis		*Pasteurella pestis*
Erysipelothrix rhusopathiae		*Proteus vulgaris*
Treponema pallidum		*Monilia*
Treponema pertenue		*Blastomyces*
Leptospira icterohemorrhagicae		*Toxoplasma*
Borrelia novyi		*Plasmodium*
Borrelia vincenti		*Listerellae*
Spirillum minus		Pleuropneumonia-like organisms
		Influenza virus
		Lymphogranuloma virus
		Rickettsiae

MECHANISM OF ACTION

The mechanism of the action of penicillin has been studied by many investigators. In adequate concentrations penicillin is bactericidal, and in lesser amounts is inhibitory or bacteriostatic. It has been shown that it prevents growth and multiplication of susceptible bacteria. Certain organisms undergo lysis in the presence of penicillin. Although in most instances this is the result of autolysis following death of the bacteria, there is evidence that penicillin is actually lytic for some bacteria. Most bacteria undergo morphologic changes on exposure to penicillin. As far as can be determined, penicillin is not destroyed although it may be hours 99 per cent of the original organisms were dead and most of the remaining 1 per cent were destroyed, rapidly or slowly, during the next 18 to 24 hours. Some organisms which were in a dormant phase upon exposure to penicillin survived and multiplied if removed from the penicillin. Bigger[25] has called these organisms "persisters."

This has evoked a controversy as to the method of treatment with penicillin. Bigger[25] is of the opinion that penicillin should be given intermittently for periods of time so that these "persisters" will grow out during the periods when penicillin is not given. When penicillin is resumed, the now growing "persisters" will be destroyed. On the basis of laboratory data and clinical results with adequate therapy given continuously, at present there does not appear to be any advantage to the method of therapy advocated by Bigger.

How does penicillin work? It has been postulated that the antibiotic interferes with the metabolic function of bacteria. It either blocks a certain enzyme system or interferes with utilization of nutrients necessary for growth or multiplication. On the basis of various studies on the inactivation of penicillin with cysteine and related sulfhydryl compounds, Cavallito and others[26] are of the opinion that penicillin may exert its antibacterial effect through its combination with some of the sulfhydryl groups and thus denies the use of these radicals to the bacteria. This problem is far from settled. Some investigators do not believe that the explanation of Cavallito is complete, since it does not explain the specificity of the effect of penicillin upon a limited range of bacterial types.

Up to bactericidal concentrations, increasing the amount of penicillin increases the effectiveness of penicillin. At or above a bactericidal level, there is only slight, if any, increase in antibiotic activity with increase in the amount of penicillin. Generally there is no relation between the size of the inoculum and the sensitivity to penicillin. With a few strains, however, the greater the size of the bacterial population, the greater the number of resistant members, and consequently the larger the amount of penicillin needed to kill these organisms. This is particularly true with more resistant strains. The clinical application of these principles is that once adequate doses are prescribed, there is no need for additional penicillin. Although penicillin has been found to be more effective *in vitro* than *in vivo* under conditions of increased temperature, in our experience, the effectiveness of the antibiotic has been found, in general, to be independent of the height of the fever whether it be due to disease or be artifically induced. This is most likely explained by the relatively slight changes in temperature in human febrile conditions. The increased effectiveness of penicillin and malaria over penicillin alone in neurosyphilis may be due to some effect of the malarial infection rather than the febrile reaction. In other stages of syphilis fever therapy has not increased the effectiveness of penicillin.

Combination of Penicillin and Other Chemotherapeutic Agents

One of the earliest problems to be investigated was whether the action of penicillin was affected by combination with other drugs, particularly the sulfonamides. The results of *in vitro* studies by several groups of investigators were at variance. Some investigators were of the opinion that sulfonamides enhanced the action of penicillin, while others believed that they did not affect its antibiotic activity and even possibly reduced its effectiveness. Recent comprehensive studies by different groups of investigators resolve the apparent discrepancies of these various studies. They have shown that with minimal or sub-bactericidal concentrations of penicillin, sulfonamides enhance the action of penicillin provided the number of organisms is low and they are sensitive to sulfonamides. On the other hand, with concentrations of penicillin that are bactericidal the sulfonamides decrease the effectiveness of the antibiotic. The explanation for this observation is thought to be that sulfonamides slow the rate of multiplication of bacteria and thus render them less vulnerable to the bactericidal action of penicillin.

Clinical experience is in accord with the findings of these investigators. If adequate doses of penicillin are administered, there is no evidence that sulfonamides improve the therapeutic results. When the dose of penicillin is found to be inadequate, an unsatisfactory therapeutic response is best combated by increasing the dose of penicillin rather than by giving sulfonamides in addition. Although the amount of penicillin employed can be increased indefinitely because of the low toxicity of this antibiotic, it is possible that the circumstances may arise when increasing the dose of penicillin will not significantly increase the concentration of the penicillin in the blood or tissues. Under these circumstances it may be advisable to give sulfonamides in addition.

On the other hand, when the amount of sulfonamides is inadequate, it is often not desirable to increase the dose because of the increased toxicity with larger doses. Under these circumstances it is best to change to penicillin, provided the causative organism is susceptible to the antibiotic.

These studies have been performed on single strains of penicillin-sensitive organisms. In a mixed infection in which one of the organisms is penicillin-resistant and sulfadiazine-sensitive and the other penicillin-sensitive, a combination of penicillin and sulfadiazine may be beneficial.

Although some investigators are of the opinion that the increased inhibition obtained with a combination of sulfonamides was an additive effect rather than actual potentiation of penicillin activity, Dawson and Hobby[27] stated that from their work they could not conclude whether the two agents acted independently or one increased the activity of the other. They had found, however, that sulfadiazine increased the activity of penicillin against one strain naturally resistant to the antibiotic. This suggested that sulfadiazine may alter the bacterial cell so as to increase its sensitivity to penicillin. It is interesting to note that recently Carpenter and his associates[28] have shown that the addition of penicillin to a mixture of sodium sulfathiazole, promin and ravinol lactate prevented the development of resistance of gonococci to these drugs *in vitro*.

It has been suggested that there may be an antagonistic action between penicillin and phthalylsulfathiazole and succinylsulfathiazole.

Bigger[29] has reported that a combination of penicillin and sulfathiazole killed large numbers of typhoid bacilli *in vitro*. Thereafter, 2 reports appeared in which 2 typhoid carriers and 6 patients with typhoid fever were cured with the use of a combination of these 2 drugs.

In certain infections caused by penicillin-sensitive bacteria and characterized by the formation of exotoxins, such as diphtheria, tetanus and gas gangrene, antitoxic serums are necessary to combat the toxins while penicillin may be useful to combat the bacteria themselves.

There are a number of reports concerning the synergistic effect of various drugs with penicillin, but none of these have practical clinical application. Bismuth and mapharsen have been reported to increase the effectiveness of penicillin in syphilitic rabbits, but this result has not been confirmed in humans with the use of short courses of these antisyphilitic drugs.

The report that penicillin potentiates the anticoagulant action of heparin has not been confirmed. There is no contraindication to giving these two drugs concomitantly when indicated.

Resistance

The susceptibility of different strains of bacteria to penicillin varies greatly. In addition to the gram-negative bacteria, which are naturally relatively resistant to penicillin, there are individual strains of organisms generally susceptible to the action of penicillin that have been found to be naturally resistant. Susceptible strains have been made resistant to penicillin *in vitro* by exposure of surviving organisms to increasing concentrations of penicillin, and *in vivo* apparently by inadequate therapy.

Two theories have been proposed to explain the development of penicillin-resistant strains in previously susceptible organisms. It is generally accepted that in any colony of organisms the range of susceptibility to penicillin is great, so that there are highly susceptible members and relatively resistant members. The sensitivity of a particular strain of bacterium is actually the susceptibility of the most resistant members. Demerec[30] believes that penicillin destroys the more susceptible members and that resistance develops through mutation and the survival of the more resistant members. It is his theory that resistance occurs naturally and is not acquired. Actually, this is merely an application of the rule of the survival of the fittest, in which penicillin acts as a selective agent to eliminate nonresistant organisms. Other investigators believe that resistance to penicillin is acquired. The latter group believes that as a result of repeated exposure to penicillin resistance is developed because of actual changes in the organism or in its metabolic requirement. At present there is experimental evidence for both theories, and undoubtedly further investigation is needed to resolve this problem.

It has been shown that bacteria that develop resistance *in vitro* undergo changes that are somewhat different from those that become resistant *in vivo*. Bacteria that develop resistance *in vitro* may lose their pathogenicity and virulence, are more readily killed by the action of human blood, and produce less toxin; and some strains produce penicillinase. Furthermore, resistance acquired *in vitro* is frequently temporary. On the other hand, organisms that become resistant *in vivo* do not lose any of their pathogenicity or virulence, and resistance is usually permanent. These properties are retained for many generations even though the bacteria are no longer in contact with penicillin.

The importance of these observations is that these penicillin-resistant strains may develop in patients treated inadequately and may be transmitted to other persons The factors which may contribute to inadequate therapy are: the presence of large numbers of bacteria, inadequate doses, interference with the access of penicillin to the site of infection such as the presence of dead tissue and debris, and inadequate drainage of purulent material.

Once an organism has been made resistant *in vitro* it will retain its resistance in *in vivo* studies, and conversely bacteria which have become resistant *in vivo* will show their resistance *in vitro*. Regardless of the source of the acquired resistance, all bacteria show a change in their biologic properties, such as decrease in pigment production, poorer hemolysis of blood, retarded growth, irregular staining, and variation in morphology.

As has been suggested previously, an organism that becomes resistant to one penicillin becomes resistant to all the penicillins even though it is exposed to only one. There is no relationship, however, between penicillin resistance and sensitivity to sulfonamides, streptomycin, or any other antibiotic.

II. ADMINISTRATION

In a previous publication the subject of the absorption, distribution and excretion of penicillin was reviewed.[31]

Intermittent intramuscular injection is undoubtedly the method of administration most commonly employed clinically. Isotonic salt solution, distilled water or 5 per cent glucose solution may be used as a diluent. We have given as much as 1,000,000 units in 1 c.c. of solution without deleterious effect. In table 4 are shown the doses needed at various intervals to produce certain desired minimal blood concentrations.

The Romansky formula (300,000 units in 1 c.c. of oil with 4.8 per cent beeswax) for prolonging the action of penicillin has been modified so that preparations which are fluid at room temperature are available. If the mixture contains crystalline penicillin of large particle size measurable levels can be expected in 90 to 92 per cent of patients for 24 hours.

Preliminary studies[32] on a suspension of procaine penicillin G in oil indicate that this preparation results in prolongation of blood levels for at least 24 hours with a minimum of local discomfort upon injection.

TABLE 4

Average Serum Penicillin Concentrations Obtainable Following Injections of Different Amounts of Penicillin

DOSE	SERUM PENICILLIN CONCENTRATIONS AT TIME AFTER INJECTION (UNITS/C.C.) HOUR							
	2	3	4	5	6	8	10	12
20,000	.03	—	—	—	—	—	—	—
30,000	.06	.03	—	—	—	—	—	—
40,000	.12	.06	.03	—	—	—	—	—
50,000	.25	.12	.06	.03	—	—	—	—
100,000	.5	.25	.12	.06	.03	—	—	—
300,000	1	.5	.25	.12	.06	.03	—	—
500,000	2	1	.5	.25	.12	.06	.03	—
1,000,000	4	2	1	.5	.25	.12	.06	.03
2,000,000	8	4	2	1	.5	.25	.12	.06

Administration of penicillin by continuous intramuscular or intravenous infusion has been advocated in an effort to obtain higher, more constant blood concentrations with a minimum of penicillin. Although there is variation from patient to patient, and in the same patient from time to time, it has been shown that, in general, a constant blood concentration of 0.1 unit per c.c. of serum can be expected for each 100,000 units given by continuous infusion over a 24-hour period. In general, doses of 100,000 to 500,000 units per day are adequate, although as much as 60 million units or more have been given in 1 day by this method. The daily dose can be dissolved in 500 to 1,000 c.c. of isotonic salt solution and the rate of flow adjusted so that the solution is administered over a 12- or 24-hour period. When it is desirable to limit the quantity of sodium administered, distilled water or a 5 per cent solution of glucose in water may be used in place of the salt solution. The flask containing the solution is connected with a Murphy drip apparatus. If the intramuscular method is to be used, a 2-inch, 18- or 20-gauge needle is inserted deep into the lateral aspect of the thigh or into the gluteal muscle. Twenty-five c.c. of 1 per cent procaine may be added to each flask of solution to alleviate pain. One intramuscular site may be used for several days.

For continuous intravenous infusion the solution is administered through a 20-gauge needle inserted into a vein, preferably one below the elbow so that the patient will have more freedom of movement. Veins in the legs may be used, if desired. The needle should be anchored firmly in place with adhesive. One vein may be used for several days, unless evidences of irritation appear. As soon as these are noted, the needle should be removed immediately to another site. This, plus the addition of 1 unit of heparin for each c.c. of solution, will almost entirely prevent thrombophlebitis.

When continuous intramuscular and intravenous infusions are not possible, administration into the bone marrow can be used. The sternum and tibiae are commonly used sites.

The desirability of oral administration of any drug is obvious. Unfortunately the concentrations of penicillin in the serum following oral administration are so variable as to make this method not entirely dependable. It has been shown that penicillin may be given orally in infections in which the causative organisms are highly susceptible to penicillin, in which tissue destruction is not extensive, and diffusion into the involved tissues is good. Oral penicillin has been found to be as efficacious as parenteral penicillin in pneumococcal pneumonia, scarlet fever, streptococcal pharyngitis and tonsillitis, erysipelas, otitis media, sinusitis, Vincent's stomatitis and pharyngitis, gonorrhea, and infections of the skin and subcutaneous tissues. It is established that an oral dose about 3 to 5 times the parenteral dose, that is, 100,000 units every 3 or 4 hours, is adequate. Although penicillin dissolved in water may be given, the taste is somewhat unpleasant, and therefore tablets and other preparations have been made available commercially. Buffered preparations are somewhat superior to plain penicillin, but there is no particular buffer of choice. The penicillin is best given at least ½ hour before and 1½ hours or more after meals.

When it is necessary to inject penicillin into the cerebrospinal fluid, the lumbar subarachnoid space is most commonly employed, but the lateral ventricles and cisterna magna may be used if necessary. Doses of 10,000 to 20,000 units dissolved in 10 c.c. of isotonic salt solution given every 24 hours result in maximum concentrations. After a slightly greater volume of cerebrospinal fluid has first been removed, the penicillin solution should be administered by slow injection or by gravity. Intrathecal injections which are not sufficiently diluted or which are given too rapidly may produce damage to the spinal cord. The use of large doses is hazardous, since intrathecal injections of 15,000 to 200,000 units have been followed by arachnoiditis, transverse myelitis, and peripheral neuritis; intraventricular doses of 15,000 to 50,000 units have been followed by signs of cerebral irritation, shock, and permanent cerebral and cranial-nerve damage. All patients receiving intrathecal penicillin should be observed carefully, since similar injuries have been reported following repeated doses of 10,000 units into the lumbar area. These reactions were probably due to the building up of high spinal-fluid concentrations as a result of daily injections for 10 or more days.

Although penicillin diffuses into the pleural, pericardial and peritoneal spaces following parenteral administration, infections of these cavities require local injection of the antibiotic. Doses of 50,000 to 200,000 units in a dilution of 1,000 to 10,000 units per c.c. of isotonic salt solution daily have been found to be effective. The volume of the penicillin solution should be about two thirds of the amount of fluid withdrawn. The use of penicillin irrigations is ineffective, since it takes 6 to 8 hours for maximum therapeutic effect. Until recently it was the opinion that underlying pulmonary disease should be treated, in addition, with parenteral or oral penicillin. It has been suggested, however, that intrapleural injections of 100,000 to 200,000 units of penicillin would result in absorption of dependable, therapeutic concentrations into the blood.

Infections of the joint are best treated by intra-articular injection of penicillin, except in the case of gonococcal arthritis, in which parenteral therapy appears adequate. Doses of 50,000 to 100,000 units in dilutions of 1,000 to 20,000 units per c.c. given daily or every other day, respectively, will maintain adequate levels for the period between injections. As much synovial fluid as can be obtained is first removed. The presence of periarticular involvement or other extra-articular complications is an indication for parenteral therapy.

Penicillin by inhalation has been shown to be effective in the treatment of respiratory infections due to susceptible organisms. Doses of 20,000 to 100,000 units dissolved in 1 to 5 c.c. of isotonic salt solution can be administered over a period of 10 to 30 minutes every 2 to 3 hours. It is best employed by having the patient inhale the nebulized solution employing a special apparatus designed for this purpose. Local reactions can be minimized by the drinking of a small amount of water after each treatment.

For local therapy a variety of methods are available. Solutions of penicillin in isotonic salt solution or water can be applied to superficial wounds as gauze soaks or as a spray, or through small rubber tubes in deeper wounds. Concentrations of 250 to 1,000 units per c.c. of solutions are used. Irrigation of wounds should not be employed, since the solution does not stay in contact with the infected surface long enough to be effective Powders containing penicillin alone or penicillin combined with sulfonamides have been manufactured. The potency is usually 5,000 units per gram, and the amount applied varies from 10,000 to 50,000 units depending on the size of the wound. The frequency of application depends on the particular wound. Penicillin ointment is available and can be applied to wounds. The amount and frequency of application depend on the size and nature of the wound. The only advantage to local therapy is that injections are avoided. It has been shown that exudates from wounds contain significant concentrations of penicillin with adequate doses of parenteral penicillin

For the application of penicillin locally in the mouth, troches of 1,000- or 5,000-unit preparations can be allowed to dissolve in the mouth at $\frac{1}{2}$- to 1-hour intervals during the waking hours or during the whole 24-hour period. Solutions of penicillin in varying concentrations up to 100,000 units dissolved in several c.c. of a watery solution may be held in the mouth for several minutes or used as a mouth wash at frequent intervals. The efficacy of this method is not established. Dental cones, cotton pledgets, and gauze saturated with penicillin (up to 100,000 units in 1 to 10 c.c.) can be inserted into tooth sockets. Daily applications are usually sufficient. Masticatory troches are available in 20,000-unit sizes. The incidence of reactions to therapy by local methods is relatively high. Although treatment by these methods is good, it is generally not so efficacious as parenteral or oral therapy. Applications of penicillin to the eye involve the same principles as treatment of other local areas.

Recently a substance, caronamide, has been synthesized which blocks the excretion of penicillin through the tubules. Oral doses of 2 to 4 grams given every 2 to 4 hours will increase the height and the duration of the concentrations of penicillin in the blood in a majority of the patients, when the drug is given in combination with the antibiotic intramuscularly or orally.

III. TOXICITY

One of the marvels of penicillin is its lack of toxicity. Since the preparations of penicillin have become progressively purer, such reactions as chills, fever, headache, flushing of the face and skin rashes observed in the early days have almost completely disappeared and, therefore, were undoubtedly due to impurities.

The incidence of pain with intramuscular injections has been minimized with the more purified preparations. If the patient does complain of pain, 0.5 to 1 c.c. of a 1 per cent procaine solution may be added to the penicillin solution before injection. Aseptic necrosis has been observed occasionally following continuous intramuscular infusions. Thrombophlebitis sometimes occurs at the site of continuous intravenous infusions. This can be avoided by the addition of 1 unit of heparin for each c.c. of penicillin solution. This reduces the speed of coagulation at the site of injection without affecting the coagulation time generally.

Oral therapy may occasionally be complicated by nausea, vomiting, or diarrhea. Some of these symptoms may be due to the mechanical irritation caused by the ingestion of several tablets rather than to any effect of the antibiotic itself.

Penicillin is somewhat irritating when injected into serous cavities. It produces a lymphocytosis in these fluids. When instilled into the pleural cavity some patients complain of pleuritic pain. Intra-articular injection is sometimes followed by slight redness, swelling, tenderness and pain on motion of the joint. All of these abnormalities disappear within 2 or 3 days after penicillin is discontinued.

The more serious toxic reactions to penicillin have been due to its irritant action on the central nervous system. Arachnoiditis, transverse myelitis, and peripheral neuritis have occurred following the intrathecal injection of doses of 15,000 units or more. Occasionally these followed smaller doses, but in these instances the reactions may have been due to the building up of high concentrations in the cerebrospinal fluid following repeated injections. Large doses of penicillin administered intraventricularly or intracisternally may cause cyanosis, symptoms of shock, convulsions and death. The application of penicillin to the cerebral cortex has produced similar symptoms. These reactions cannot be attributed to impurities, since they have followed the injection of both amorphous and crystalline penicillin and are independent of the total amount or concentration of the penicillin solution. As in other serous cavities the injection of penicillin into the spinal fluid is followed by an increase in the number of lymphocytes in the fluid. This must be borne in mind in evaluating spinal fluid containing penicillin.

Local reactions following contact with penicillin are apparently due to hypersensitivity, since the antibiotic is not a primary irritant when applied locally in the proper concentrations to the skin or mucous membranes. Dermatitis may result from contact with penicillin powder, solution, spray or ointment, and manifest itself as an erythematous, vesicular, bullous or exfoliative eruption accompanied by edema, weeping and pruritus. The mucous membranes may react similarly with the use of mouth washes, gargles, sprays, troches and tablets. The membranes may become red, swollen, and vesicular, and may exfoliate. Conjunctivitis, blepharitis and scleritis may develop following penicillin contact with the eyes.

General reactions may manifest themselves by any combination of the following symptoms:

1. Skin rashes: morbilliform, erythematous, purpuric, vesicular, exfoliative, or erythema multiforme, erythema nodosum and urticaria.
2. Angioneurotic edema
3. Malaise, general aching, and fever
4. Generalized lymphadenopathy
5. Pain and swelling of joints
6. Dyspnea; pulmonary edema
7. Nausea, vomiting, abdominal cramps
8. Syncope and shock

Some of these manifestations are similar to serum sickness (skin rashes, arthralgia, lymphadenopathy), whereas others resemble immediate serum reactions (angioneurotic edema, vomiting, abdominal cramps, dyspnea and syncope). Others, such as erythema nodosum and exfoliative dermatitis, are frequently seen in hypersensitivity to other drugs.

Reactions to penicillin occur immediately with the institution of therapy or may be delayed for 5 to 25 days after the start of treatment. They have even occurred 7 to 10 days after penicillin was discontinued. Although immediate reactions occur usually with a repeated course of penicillin, they may occur when there has been no history of penicillin administration. Rostenberg and Welch[33] observed positive skin tests of the tuberculin type in 5 per cent of 144 patients who had no known previous contact with penicillin. It has been postulated that the sensitization occurred *in utero* or as a result of previous contact with the mold Penicillium, although it is known that allergy to penicillin is not related to any sensitivity to the many strains of the mold tested. Delayed reactions occur almost invariably during the first course of penicillin. Furthermore, the incidence of reactions to penicillin is, in general, much more common in patients who have received penicillin previously, or who have had contact with the antibiotic or following local therapy. It has been reported that dermatologic patients developed immediate reactions 4 times as frequently as non-dermatologic patients, and there was essentially no difference in the incidence of delayed reactions.

The presence of allergy to penicillin has been confirmed by the demonstration of positive tests for hypersensitivity in some patients who have had reactions. These have been elicited with crystalline material. The application of these tests is complicated by the facts that: positive reactions do not occur in all individuals who manifest the symptoms characteristic of hypersensitivity; a number of normal patients react positively; and hypersensitivity may disappear after penicillin is discontinued or even in some instances while it is still being administered. Evidence of hypersensitivity can be elicited sometimes only by careful questioning about previous penicillin therapy and close observation during treatment.

In most instances penicillin therapy can be continued with the addition of the antihistamine drugs, benadryl or pyribenzamine. Since deaths have been reported in patients who developed an exfoliative dermatitis and a scarlatiniform and urticarial rash while under penicillin therapy, the occurrence of these reactions is an indication for the prompt discontinuation of the antibiotic.

This is particularly true with exfoliative dermatitis, since it may progress even after penicillin is discontinued. Angioneurotic edema involving the air passages, dyspnea, pulmonary edema, syncope or incipient shock are also indications for cessation of penicillin therapy. With the milder reactions penicillin may be continued, and frequently the reactions will subside in spite of the continued therapy. In patients who have previously had serious reactions to penicillin the antibiotic may be tried again cautiously if necessary. Frequently a repeated reaction will not recur, particularly if antihistamine drugs are given concomitantly.

There is evidence that penicillin may accelerate the coagulation of the blood. It has been reported that penicillin has a toxic effect on the uterus and may result in menstrual disorders and abortion. More complete studies, however, revealed that penicillin has no effect on the uterus. Peripheral neuritis has been reported as following intramuscular injection of penicillin. It appears, however, that these reactions may have been due to impurities in the penicillin.

There are isolated reports of agranulocytosis and azotemia developing coincident to penicillin therapy. The exact role of the antibiotic in the development of these reactions is uncertain. The scarcity of such reactions makes it unlikely that penicillin itself was responsible. Signs resembling nicotinic acid deficiency have been observed in a patient who was given penicillin orally.

Exacerbation of mycotic infections of the skin and reactions to their products (id reactions) have been observed following penicillin therapy.

Herxheimer reactions following the institution of penicillin therapy are seen in syphilis, particularly in the early stages. These reactions are due to the action of penicillin on the spirochetes and are not an effect of penicillin on the patient. For that reason small doses of penicillin or premedication with bismuth do not prevent such reactions.

In our experience toxic reactions to penicillin have been few. Only 7 patients out of over 600 carefully followed patients who received the drug parenterally demonstrated an allergic reaction. Six patients had urticaria, and 1 had fever. All of the former had received amorphous material and the latter a crystalline preparation. Of the 320 patients treated with oral penicillin none have developed evidence of hypersensitivity, 8 patients complained of nausea, vomiting and/or diarrhea, and these symptoms may have been due to a mechanical factor caused by the penicillin tablets. Penicillin in beeswax and peanut oil has been given to patients with evidence of allergic reactions in about 5 per cent of cases. On the basis of other studies, it appears that some of these reactions may be due to the vehicle rather than the penicillin.

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THE TREATMENT OF BACTERIAL ENDOCARDITIS WITH PENICILLIN AND STREPTOMYCIN*

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IT HAS been definitely established that penicillin is curative for bacterial endocarditis caused by penicillin-sensitive bacteria. It is now generally agreed that all patients with this disease should be treated with penicillin regardless of the severity of their condition on admission, the presence of complications, or the duration of the disease prior to the administration of penicillin therapy, since these factors are not indicative of the final outcome. We have reviewed all the English literature and have found a total of 556 cases of subacute bacterial endocarditis reported as having been treated with penicillin. Of these, 68 per cent have been reported as cured or in remission. If the patients who received what appears at present to have been inadequate doses or who died of cardiac complications or cerebral emboli after the blood stream was sterilized are excluded from this survey, the recovery rate then becomes 78 per cent. Until the present time only a small number of patients with endocarditis have been treated with streptomycin.[1, 2] It appears, however, that in infections caused by streptomycin-sensitive bacteria it is as effective as penicillin in endocarditis.

Although penicillin has revolutionized the prognosis of bacterial endocarditis, some problems remain unsettled: (1) the optimum dose, (2) duration of treatment, (3) the reasons for failure in spite of what appears to be adequate therapy, (4) the occurrence of relapses, and (5) the prevention of recurrences.

It is the purpose of this paper to outline the general principles of diagnosis and management of patients with bacterial endocarditis in the light of the experience we have had with penicillin and streptomycin in the treatment of 43 patients, and to discuss the problems which arise both during and following treatment.

RESULTS

Two of us [3, 4] have previously reported the results obtained with penicillin in the treatment of 18 patients with endocarditis. Since these preliminary reports we have treated an additional 25 patients, one of whom was also given streptomycin. Of the 43 patients, 40 were treated on the medical wards of Gallinger Municipal Hospital and 3 in the private practice of one of us.

It table 1 are shown all the cases of bacterial endocarditis classified according to the causative organism. In 25 patients the causative organism was a Streptococcus viridans, in 1 a Streptococcus faecalis, in 15 a staphylococcus, and in 2 a pneumococcus. In order to evaluate the effectiveness of penicillin, we have divided the cases into 2 groups, those who died of active infection and those who succumbed as a result of heart disease after all evidence of active infection had disappeared. Nine of the 25 patients with endocarditis due to the Streptococcus viridans died. Of these, 7 died of the active infection and 2 died with congestive heart failure after the infection was apparently cured. The 1 patient whose endocarditis was caused by a Streptococcus faecalis recovered with the use of streptomycin after 2 courses of penicillin had failed to produce a cure. Five of the 15 patients with staphylococcal endocarditis and 2 with the pneumococcal infection died. The over-all case fatality rate for all of our patients was 37 per cent. Only 33 per cent died with an active infection.

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TABLE 1

Results of Treatment of Endocarditis with Antibiotics

TYPE OF ENDOCARDITIS	NUMBER OF PATIENTS	DIED OF ACTIVE INFECTION	DIED OF CONGESTIVE HEART FAILURE AFTER APPARENT RECOVERY
Streptococcus viridans	25	7	2
Streptococcus faecalis	1	0	0
Staphylococcus	15	5	0
S. aureus	7	2	0
S. Albus	7	2	0
both	1	1	0
Pneumococcus	2	2	0
Total	43	14 (33%)	2 (4%)
		Total 37%	

Analysis of our data reveals that such factors as age, sex, valvular involvement, the specific valve involved, the number of valves involved, the duration of the infection, the presence of a serious complication before treatment and the sensitivity of the microörganism were of no significance in the ultimate prognosis. We have, however, observed that the initial response of the patient to penicillin, as judged by the time required for blood cultures to become negative, for the temperature to return to normal, and for the toxicity to diminish, is of prognostic significance. Almost invariably these patients who did not respond within 2 weeks after initiation of therapy died of active infection in spite of what appeared to be adequate therapy. Several of these patients came to autopsy and were found to have evidence of extensive endocarditis.

We encountered such complications as emboli, congestive heart failure, glomerulonephritis, pyelitis, pneumonia, thrombophlebitis and septic arthritis. As shown in table 2, congestive heart failure and glomerulonephritis were undoubtedly contributory in the demise of each of 2 patients.

TABLE 2

Incidence and Effect of Complications

TYPE OF COMPLICATION	NUMBER OF PATIENTS	CONTRIBUTING TO CAUSE OF DEATH
Congestive Heart Failure	11	2
Embolization	23	0
Glomerulonephritis	3	2
Pyelitis	2	0
Pneumonia	4	0
Thrombophlebitis	4	0
Septic Arthritis	1	0

DIAGNOSIS

Until recent years, it was customary to differentiate endocarditis into the acute and subacute varieties, depending principally upon a history of previous heart disease, the duration, severity, and etiology of the infection, and the anatomic location of the lesion. There is little need for such rigid classification, since penicillin has been employed in the treatment of this disease. The tendency now is to designate the endocarditis solely according to the causative organism, because proper management of the infection depends upon knowledge of the causative organism and its susceptibility to penicillin.

Diagnosis should be established as early as possible in order to minimize the amount of valvular damage and other sequelae of the infection. The frequency of prompt and correct diagnosis of bacterial endocarditis is directly proportional to the degree of suspicion of the physician. To wait, however, for the appearance of such manifestations as emboli before making the diagnosis is often a means of courting therapeutic failure. The earlier sign of unexplained remittent fever is of greater diagnostic importance, particularly in patients with a history of previous valvular heart disease who have recently had an upper respiratory tract infection, or have undergone such operative procedures as dental extraction, tonsillectomy, or cystoscopy. A history of a recent infection due to the staphylococcus, pneumococcus, gonococcus, meningococcus, or beta hemolytic streptococcus in patients with unexplained fever should prompt the physician to have repeated blood cultures made.

Blood Cultures

At least 2 blood cultures positive for the same microörganism are desirable before considering that the diagnosis is established. We have discarded the commonly employed practice of taking daily blood cultures and instead take blood for culture 3 to 6 times during a 24-hour period. The results obtained by the use of this method are just as reliable as those obtained by taking daily blood cultures, and the diagnosis is almost invariably established sooner. Occasionally we have had a patient in whom the diagnosis was strongly suspected and yet it appeared unwise to delay treatment until the bacterium was isolated. In such an instance cultures were taken at ½-hour to 1-hour intervals over a period of 3 to 6 hours.

We have found in general that best results have been obtained by adding from 5 to 8 c.c. of blood to 30 to 40 c.c. of media such as brain-heart infusion or tryptose-phosphate broth. In some instances it is also desirable to make pour plates. All cultures should be incubated both aerobically and anaerobically. They should be kept at least 2 weeks before discarding, since many observers have found that in occasional cases the organisms may not appear until that time. In order to obtain more prompt and reliable results penicillinase should be added to the cultures taken during therapy and to the original culture if the patient has been receiving penicillin.[5] Frequent follow-up cultures during and after treatment are desirable.

If there is difficulty in isolating the causative organism by routine blood cultures, then culture of the sternal marrow may be tried.

Treatment

DETERMINATION OF DOSE

Most of the strains of bacteria which cause endocarditis are killed by low concentrations of penicillin. Hunter[6] states that the growth of 90 per cent of the strains recovered from patients with subacute bacterial endocarditis is inhibited by 0.1 unit per c.c. or less of penicillin. For the remaining 10 per cent, however, up to 10 units per c.c. or more may be required. Consequently it is very desirable to determine the sensitivity of the causative microörganism to penicillin in order to be certain that the doses employed are adequate. The determination of the sensitivity may also serve as an aid in establishing the diagnosis. Occasionally an organism which is frequently a contaminant, such as the Staphylococcus albus, may be isolated from several blood cultures. If, in addition to other criteria, the sensitivity to penicillin is the same for all of the strains, it is then more likely that they are the same strain and consequently less likely that they are contaminants.

As a result of the correlation of clinical results with data on the sensitivity of the organism and blood levels of penicillin, many investigators are of the opinion that the optimal daily dose of penicillin should be that which attains average blood levels of from 4 to 8 times the amount required for the *in vitro* inhibition of the causative organism. Schlecter and MacLean[7] have compared the *in vitro* penicillin sensitivity of organisms isolated from the blood of patients with endocarditis with the serum of these patients while they were receiving penicillin. They found that complete inhibition was not obtained with the serum until the concentration of penicillin present was 4 times the *in vitro* penicillin sensitivity. Such excessive serum levels are needed not only to insure sterilization of the blood stream, but also to insure adequate penetration of the penicillin into the bacterial vegetation. Doses required for most patients range from 500,000 to 1,500,000 units for each 24-hour period.

There may be objections to delaying treatment until the sensitivity of the microörganism is determined. In those instances in which we have delayed treatment for 24 hours pending the determination of the sensitivity of the organism, we have had no unfavorable results. In the critically ill patients in whom it appeared unwise to delay treatment, we began therapy promptly, using massive doses after blood cultures were first obtained. Later the dose was adjusted on the basis of the sensitivity of the etiologic bacteria.

DURATION OF TREATMENT

In a previous review of the literature, we found that 27 per cent of those patients who were treated for less than 6 weeks had a relapse of their infection.[8] It has been reported that at autopsy patients who had previously been treated for endocarditis with adequate doses of penicillin for less than 6 weeks showed evidences of complete healing of the infection.[9] Moore, [10] however, has recently demonstrated organisms by smear in the vegetative lesions of endocarditis when treatment was continued for less than 6 weeks despite doses sufficient to maintain *in vivo* inhibitory concentrations. Meads,[11] Dawson,[12] and Mokotoff[13] have also demonstrated by smear and culture organisms in the vegetations of patients who were treated continuously for less than 6 weeks or had received short, interrupted courses of penicillin. On the other hand, it is unusual for a relapse to occur or for positive bacteriologic findings to be obtained from the valves of patients who have been treated for more than 8 weeks unless the daily dose has been inadequate. Of all our patients in whom penicillin therapy was successful, only 1 had a relapse which could be attributed to inadequate duration of therapy. The patient had received what apparently were adequate daily doses for a period of 31 days, when the penicillin was discontinued because of a shortage of the antibiotic. Two weeks after therapy had been discontinued she developed evidences of a relapse. She was then given a second course of treatment for 35 days, following which she made an uneventful recovery. For these reasons, many investigators, as well as we, believe that treatment should be continued for about 8 weeks if best results are to be expected. There are some, however, who believe that massive doses given for a period of 3 to 4 weeks are equally efficacious.[14, 15] The theory is that with massive doses prompt penetration of penicillin into the innermost portions of the vegetation with destruction of the bacteria is possible, whereas with smaller doses penetration is gradual and treatment need be prolonged. The advantages of shorter courses of therapy are obvious. Since relapses, which are always dangerous, have been reported with this method, however, it would appear wise to endure the inconvenience of prolonged treatment rather than be faced with the uncertainty of short-term therapy.

METHODS OF ADMINISTRATION

The intermittent intramuscular method of administration of penicillin is the one most commonly used. When this method is employed, the total daily dose is divided into equal doses given every 2 to 4 hours throughout the day and night. We have used as much as 2,000,000 units contained in 3 c.c. given every 2 hours. Such high concentrations are usually uncomfortable, but the discomfort may be overcome by adding 0.5 to 1 c.c. of 1 per cent procaine to the penicillin solution. The advantage of the intermittent intramuscular method is its simplicity. On the other hand, the pain of repeated injections makes it less desirable for the patient.

Other valid objections to this method are that the blood levels are fluctuating and frequently inconstant and that relatively large amounts of penicillin are inefficiently used to obtain minimal blood levels. Penicillin in wax and oil has been used to delay absorption and give more constant prolonged blood levels. Doses usually range from 300,000 to 600,000 units given every 12 hours. Some patients, however, do not tolerate large amounts of inert material injected intramuscularly over a protracted period of time.

Some investigators[16–19] are of the opinion that continuous intramuscular or intravenous infusions should be used exclusively in the treatment of this infection. Such infusions require careful attention, and the patient is necessarily immobilized to some extent. On the other hand, higher, more constant and more predictable blood levels using the least amount of penicillin for the achievement of such levels can be obtained with this method. In patients requiring large amounts of penicillin, this is the most economical method. In infections caused by relatively resistant organisms, it is the method of choice.

The use of oral preparations of penicillin is not advised, even though there are reported cures by this technic. There have also been failures with this method and it is not recommended.[20, 21] Blood levels attained by the administration of penicillin orally are usually low and difficult to maintain. Two of our patients received penicillin orally for the first 2 days of therapy. When the patients did not improve clinically and blood cultures remained positive, the intermittent intramuscular method of administration was instituted with prompt improvement. In one of the patients the failure of oral penicillin therapy was investigated and it was found that the blood concentrations of penicillin were frequently below the *in vitro* bactericidal level for the causative organism.

ADJUVANT THERAPY

The general use of adjuvants to penicillin therapy is not indicated at the present time. There is one report,[22] however, in which administration of sulfadiazine and penicillin was curative but each drug when used alone was ineffective. Hobby[23] has shown that under special conditions *in vitro* the destruction of organisms can be achieved in a medium containing subbactericidal concentrations of penicillin if sulfadiazine is added. Generally, however, increasing the doses of penicillin is more dependable than the addition of sulfonamides.

Most investigators are of the opinion that heparin is no longer indicated except when it is incorporated in a continuous intravenous infusion in order to minimize the risk of local thrombophlebitis. Its use does not preclude the development of emboli or the formation of fibrin on the bacterial vegetation and it apparently increases the tendency to hemorrhage. The synergism between heparin and penicillin reported by Loewe and associates[18] has not been verified.

Problems of Penicillin Therapy

The failure of treatment of 25 to 35 per cent of patients with bacterial endocarditis is challenging. An analysis of the various factors which may be concerned with such failures should be helpful in obtaining a better knowledge of treatment of this disease. Problems concerned with penicillin therapy arise both during and following treatment. It is difficult to predict the outcome while penicillin is being administered to patients with bacterial endocarditis. Patients often recover in spite of the presence of one or more of the following phenomena: the persistence of low-grade fever, an elevated sedimentation rate, or leukocytosis; the occurrence of emboli as long as 6 weeks following initiation of therapy; and the development of congestive heart failure. On the other hand, the prognosis must be guarded even though patients appear to be doing well and blood cultures remain sterile. They may die of congestive heart failure, emboli, or renal insufficiency, late in the course of therapy or even after treatment has been discontinued. Such factors as overwhelming infection, refractory organisms, relapses, and the occurrence of reinfection also account for failures of penicillin therapy during and after treatment.

PERSISTENCE OF SIGNS OF INFECTION DURING THERAPY

The persistence of a low-grade fever, increased sedimentation rate, and leukocytosis during treatment with penicillin frequently poses a problem as to whether the endocarditis is still active or some other condition may be responsible for the persistence of findings. If blood cultures remain sterile and other causes for these findings are present, their persistence should not be the cause of great concern. We have found, for example, that resolution of a pulmonary infarct is almost invariably associated with a protracted, low-grade fever. This was observed in 11 patients. Four of our patients had pneumonia, 4 had evidence of thrombophlebitis, and 2 had pyelitis which accounted for protracted fever. Some unrelated intercurrent infection, especially active rheumatic fever, should always be searched for in a patient with bacterial endocarditis who runs an unexplained fever. Endocarditis and active rheumatic fever occasionally occur together,[21] although we have not observed it in any of our patients.

OCCURRENCE OF CONGESTIVE HEART FAILURE

The problem of concurrent or subsequent congestive heart failure in patients treated with penicillin is ubiquitous and has received much attention in recent literature.[24, 25] There are several causes for the development of this complication. Patients go into heart failure because of certain mechanical factors. These may occur in one of several ways. The added destruction of previously deformed valves by the endocarditis may be sufficient to precipitate heart failure, or the bacterial vegetations may be so extensive as to cause previously normal valves to become markedly deformed and mechanically defective. There is good evidence that the actual healing of the vegetations can increase valvular damage and thus cause heart failure.[9] The contraction of the fibrous tissue contained in the healing vegetation can produce an insufficient valve, and excessive calcification which occurs during the healing process may cause a stenotic valve. Thus, such mechanical defects may in time be responsible for the development of congestive heart failure in these patients. There are also patients who develop congestive heart failure as a result of a toxic myocarditis due to the active infection. In addition, cardiac decompensation may be caused by a specific etiologic factor other than the endocarditis, such as the acute myocarditis of rheumatic fever. Pulmonary infarction may superimpose sufficient additional strain on a diseased heart to precipitate heart failure.

The exact role that the occurrence of congestive heart failure plays in the prognosis of patients with endocarditis is uncertain. Eleven of our patients developed congestive heart failure during the course of penicillin therapy. Of these, 2 died shortly thereafter. Other complications of the disease were also present, however, and probably contributed to the cause of death in these cases. Two patients died later with cardiac decompensation after all evidences of active infection had disappeared. In our experience, the development of heart failure does not influence the response of the infection to penicillin, but it does increase the seriousness of the disease. When it occurs, it undoubtedly may be responsible for death during an otherwise successful course of therapy, and it certainly decreases longevity after recovery from the infection. There is general agreement, however, that the development of heart failure during therapy does not indicate hopelessness, and therapy should be continued regardless of the complications.

In patients with existent or impending heart failure who are receiving massive doses of penicillin, the amount of sodium being given as the salt of penicillin may become significant. Under these circumstances the other salts of penicillin may be used.

THE OCCURRENCE OF EMBOLI

Embolic phenomena may occur at any time during therapy with penicillin or even following such treatment. Others,[21] as well as we, have observed such phenomena for as long as 6 weeks after all signs of the active infection had disappeared. The skin, brain, meninges, lung, and kidney were the usual structures involved. Two of our patients had embolization of the larger arteries of the extremities. Four patients with cerebral emboli made uneventful recoveries. In general, the occurrence of peripheral emboli was not of great consequence in any of our 21 patients who had such manifestations during or following therapy. All the patients who died with active infection had evidence of multiple pulmonary emboli. The exact role of these emboli in the death of these patients is uncertain, because the course was similar to that observed prior to the days of penicillin therapy. It appears that if it had been possible to control the infection these emboli would not have been too significant, since many patients in whom the infection was controlled had evidence of multiple emboli to vital structures and survived.

Loewe and his associates[18] have recommended the prophylactic use of heparin for the prevention of emboli, but the efficacy of such adjuvant therapy is equivocal as previously discussed.

RENAL COMPLICATIONS

Focal glomerulonephritis is the most common renal complication encountered in this disease but is not too important clinically since it does not seriously impair renal function. In a small percentage of cases, however, a true diffuse glomerulonephritis develops and is of more serious import. Anderson[26] states that this latter complication is most apt to occur in so-called "bacteria-free" cases. As seen in table 2, 3 patients had what appeared on clinical evaluation to be diffuse glomerulonephritis. Of these, 2 died with this renal complication as an important contributing cause of death. Unfortunately a postmortem examination was impossible.

Sufficient data have not yet been accumulated to enable one to state definitely what effect penicillin has upon the incidence of diffuse glomerulonephritis in patients with endocarditis. Perhaps penicillin will reduce the incidence of this complication by virtue of its ability to destroy the sensitizing microörganism. On the other hand, the incidence may increase since more patients are being cured of their endocarditis and consequently have time to show evidence of sensitivity.

OVERWHELMING INFECTION

Overwhelming infections are seen most commonly when the staphylococcus, pneumococcus, beta hemolytic streptococcus, gonococcus, and meningococcus are the causative microörganisms. The duration of infection before therapy is instituted is of greater importance in infections caused by these organisms than in disease produced by alpha and gamma hemolytic streptococci. In the presence of a history of previous infection with these microörganisms and in cases of severe infection, including those caused by the Streptococcus viridans, it is unwise to delay therapy. In 2 of our patients with staphylococcal endocarditis the diagnosis was not established for several days and the patients expired shortly after therapy was started. Persistent efforts, therefore, to establish the diagnosis should be made in the manner previously described. In seriously ill patients it may be necessary to institute immediate treatment with massive doses of penicillin after sufficient bacteriologic specimens have been obtained and before the reports from examination of these specimens are available.

RESISTANT ORGANISMS

The consideration of resistant organisms resolves itself into three problems: (1) What constitutes a resistant organism? (2) Why are some organisms apparently sensitive *in vitro* and yet are resistant to adequate therapy? (3) Why do patients develop resistant organisms during the course of penicillin therapy?

At present the entire concept of what constitutes resistant organisms is undergoing change. Now that the supply of penicillin is plentiful, treatment with massive doses is being undertaken and cures are being achieved where formerly the resistance of the organism would have made it prohibitive. In 1 of our cases we were able to attain a serum concentration of 160 units per c.c. of penicillin with the use of massive doses of penicillin plus caronamide.* This case will be discussed in detail elsewhere. Such concentrations are well above the bactericidal level required for most of the refractory organisms reported in the literature to date. Other investigators have treated relatively resistant organisms with good results by using as much as 40,000,000 units of penicillin per day.[27, 28]

Recently Loewe and his co-workers[29, 30] reported a previously unrecognized strain of nonhemolytic streptococcus which they have designated as Streptococcus s.b.e. They found that this organism in many instances proved to be refractory to penicillin in standard dosage although it was readily inhibited by penicillin *in vitro*. Furthermore, the clinical course of patients infected with Streptococcus s.b.e. was more severe than is usually seen in Streptococcus viridans infections. After learning of this report, we began to look for Streptococcus s.b.e. in the blood of our patients. We have isolated the organism from 2 of the last 10 patients we have studied for endocarditis, and our observations are similar to those of Loewe et al. Although the infecting organism of these patients was quite sensitive to penicillin, they died of their disease after running hectic clinical courses. One of these patients, however, is not included in the mortality figures for the present series since she died before we had an opportunity to treat her, although she had received penicillin therapy at another institution.

Four of our patients had infecting organisms which increased in resistance during the period of penicillin administration. These patients ultimately recovered, however, when the dose of penicillin was sufficiently increased. In 2 of these cases, inadequate doses of penicillin were unknowingly given, chiefly because the diagnosis of endocarditis was not made until after the patients had been treated with small doses of penicillin for some other condition. Development of resistant organisms often occurs when treatment is inadequate. The common error in this respect seems to be the administration of daily doses which are too small, or possibly the continuation of therapy for insufficient periods of time. The proper dosage schedule and the recommended duration of therapy have already been described. The development of resistance on the basis of inadequate dosage then is not usually a problem. Of greater concern to the physician are those patients who develop resistant organisms on what appears to be adequate therapy. The other 2 of our patients who developed resistant organisms belong to this category. The explanation may be that one cannot always transfer laboratory findings to the patient with absolute assurance of accuracy and safety. It is therefore not possible to correlate *in vitro* sensitivity studies with *in vivo* penicillin blood concentrations in every case. Successful therapy is most likely dependent upon the penetration of the penicillin into the valve and not necessarily upon its concentration in the blood stream. This is the principal explanation why an *in vivo* concentration of from 4 to 8 times the *in vitro* sensitivity has been recommended.

The process of the development of resistance by organisms can be minimized. In general, the dosage of penicillin should be based on the sensitivity of the causative organism *in vitro*. Blood cultures should be taken repeatedly during the course of therapy, and any organisms isolated therefrom should be rechecked for sensitivity, particularly if signs of infection persist. If a resistant organism is found, it may be wise to give massive doses of penicillin until repeated sensitivity studies are made.

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* 4′ Carboxyphenylmethanesulfonanilide—a compound which inhibits excretion of penicillin; supplied by Sharp & Dohme, Inc., Philadelphia, Pa.

RELAPSES

Relapses usually occur within the first 2 weeks after penicillin has been discontinued. One of our patients whose case history is illustrative of this problem, as well as many of the other points discussed, is presented in detail.

C. A., a white male, aged 58, was transferred to Gallinger Municipal Hospital from another institution with the diagnosis of bacterial endocarditis due to a Streptococcus viridans. He had received 12,000,000 units of penicillin in oil and wax over a period of 3 weeks prior to transfer. Penicillin was discontinued because of the development of a generalized urticaria. Prior to treatment he had been ill with symptoms of weakness, malaise, weight loss, muscular aches and pains, and intermittent chills and fever for a period of 5 months. On admission to Gallinger he was found to have several conjunctival petechiae, a harsh blowing apical systolic murmur (grade IV), a spleen palpable 1 fingerbreadth below the costal margin, a generalized urticarial rash, a temperature of 102°F., and a pulse rate of 120. Benadryl was prescribed for the relief of urticaria with excellent results. Skin tests indicated that the patient was sensitive to the oil and wax and not to penicillin. Blood cultures revealed the causative organism to be a Streptococcus faecalis which was sensitive to 6.2 and resistant to 3.1 units per c.c. of penicillin. Accordingly, he was given a dose of 1,000,000 units every 2 hours intramuscularly for 56 days. His clinical response was good, and repeated blood cultures during therapy remained sterile. Two days after cessation of penicillin, however, the causative organism was again isolated from cultures of the blood. The sensitivity was found to be the same as that of the original organism. Consequently he was placed on a régime of 2,000,000 units every 2 hours along with 2 grams of caronamide every 4 hours for an additional 56 days. The concentrations in the blood ranged from 10 to 160 units per c.c. of serum. Again his clinical response was good, save for a bout of mild congestive heart failure which responded well to digitalis and mercurial diuretics. Fourteen days after the second course of penicillin was stopped, the Streptococcus faecalis reappeared in the blood cultures. It was the opinion that although the concentrations of penicillin in the blood were more than adequate, penetration into the diseased valve was inadequate. Since it was not likely that better levels could be achieved with larger doses and because it was not economically feasible to give larger doses of penicillin or the same dose for longer periods of time, the patient was placed on a regimen of 4 grams of streptomycin a day by continuous intravenous injection when it was found that the causative organism was sensitive to 3.2 units of streptomycin. This was continued for 56 days and he is asymptomatic 2 months after therapy has been discontinued, except for signs of vestibular nerve impairment attributable to streptomycin toxicity.

This case is of particular interest, since it illustrates many of the problems concerned with the administration of penicillin to patients with bacterial endocarditis, namely, proper dosage schedules, intervening congestive heart failure, and relapse. It would appear that although the blood stream and the superficial portions of the vegetation were sterilized, the infection apparently remained active deep within the avascular central portion of the vegetation. That the microörganism did not increase in resistance following the first course of treatment might indicate that not even sub-bactericidal levels of penicillin were obtained in the center of the lesion in spite of our efforts to maintain penicillin blood concentrations of from 4 to 8 times that of the *in vitro* sensitivity. This case illustrates also that some patients fail to respond to therapy with penicillin in spite of receiving what apparently are adequate doses for adequate periods of time as judged by all established standards of treatment. It is therefore not always possible to translate *in vitro* effect to *in vivo* results with 100 per cent efficiency. Thus, sensitivity studies on the causative organism are subject to the fallacies common to all laboratory procedures.

The indication for the use of streptomycin in the treatment of endocarditis due to gram-negative bacteria is obvious in some cases. When the causative organism is gram-positive but relatively resistant to the action of penicillin, or becomes resistant to penicillin during therapy and yet is sensitive to streptomycin, the use of this antibiotic may be life-saving. We have presented such a case.

REINFECTIONS

The likelihood that patients who have been clinically cured of their endocarditis by penicillin may become reinfected is ever present. As more patients are cured of their original infections, the opportunity for reinfection increases. Although penicillin will cure the infection as it arises, it cannot remove the underlying valvular heart disease which is so important a predisposing factor. None of our patients had evidence of reinfection, although 1 patient known to be addicted to heroin had a recurrent bacteremia 1 year after recovering from the endocarditis following the resumption of the use of the opiate intravenously with unsterile instruments.

The original infection caused by a hemolytic, coagulase-negative Staphylococcus aureus was treated successfully by the use of 20,000 units of penicillin at 2-hour intervals for 56 days. When the patient returned 1 year later with symptoms of an infection, the diagnosis of lobar pneumonia was made. He was placed on a regimen consisting of 75,000 units of penicillin every 3 hours by mouth. There was no clinical improvement after 72 hours of treatment. In the interim, a hemolytic, coagulase-positive Staphylococcus aureus was twice grown from the blood. The dosage of penicillin was increased to 500,000 units per day by continuous intramuscular infusion. Blood cultures remained positive, and the resistance of the organism to penicillin was found to have increased 8-fold. He was placed on a dosage schedule of 1,000,000 units per day for 10 days without effect. Then it was found that the organism was sensitive to 0.22 units per c.c. of streptomycin. He was given 5,000 units of the antibiotic every 4 hours by the intermittent intramuscular route. After 56 days of this therapy the infection was ultimately controlled.

The problem of reinfection is closely associated with the problem of the prophylactic use of penicillin in susceptible individuals. The oropharynx has received much attention as the portal of entry for the infection or reinfecting microörganism. Although it is believed that upper respiratory tract infections predispose to endocarditis, it is not certain; and, in any event, the occurrence of such infections is difficult to control or predict. For this reason any prophylactic régime with sulfonamides or penicillin which is employed in upper respiratory tract infections to prevent the causative organism from entering at this site is not usually practicable. On the other hand, the recurrence of bacteremia following tooth extraction and its relationship to the pathogenesis of bacterial endocarditis is established. Previous studies of other investigators[31, 32] indicate that the administration of 2 grams of sulfadiazine 24 hours before dental extraction and 1 gram every 4 hours for 48 hours will diminish or prevent the bacteremia which sometimes follows this procedure. Two of us[33] have found that the administration of 600,000 units of penicillin in wax and oil 3 to 4 hours prior to dental extraction decreases the incidence of bacteremia due to the Streptococcus viridans. Hunter[14] has reported the development of endocarditis in a patient who was given sulfadiazine in full doses for 48 hours combined with penicillin, 25,000 units intramuscularly every 3 hours for the first 24 hours following extraction. Recently Thill and Meyer[34] reported that penicillin therapy for 54 hours after dental extraction did not prevent the development of Streptococcus viridans endocarditis in 1 of their patients. Not enough data, however, have been published as yet to permit decision as to which drug is preferred, whether a combination of sulfonamide or penicillin therapy should be used, or whether any chemotherapeutic prophylaxis is of value. It appears, however, that penicillin will definitely influence the development of post-dental extraction bacteremia, although the exact time-dose relationship between the administration of penicillin and extraction of teeth has to be worked out. There are numerous investigations being carried out at present. Until such time as chemotherapeutic prophylaxis has been proved ineffective, its use would seem to be indicated.

RECOMMENDED PLAN OF MANAGEMENT

In conclusion, successful therapy with penicillin is dependent upon an understanding of certain principles of diagnosis and treatment: (1) The physician should have a high degree of suspicion for this disease in patients with a febrile illness, particularly in the presence of heart disease and a previous history of recent tooth extraction, upper respiratory infection, or pyogenic infection; (2) the causative organism should be sought for by taking frequent blood cultures promptly and repeatedly; (3) the sensitivity of the microörganism to penicillin should be determined in every case; (4) the dosage of penicillin should be governed according to the susceptibility of the infecting strain, in general a dose selected which will give a blood level 4 to 8 times the *in vitro* sensitivity; (5) the treatment should be continued for at least 8 weeks; and (6) critically ill patients should receive massive doses promptly after sufficient bacteriologic specimens have been obtained.

SUMMARY

1. We have treated 42 patients with bacterial endocarditis by means of penicillin and 1 patient with penicillin and streptomycin. Twenty-five cases were caused by the Streptococcus viridans, 1 by the Streptococcus faecalis, 15 by the staphylococcus, and 2 by the pneumococcus. The over-all case-fatality rate for this series of patients is 37 per cent; 4 per cent died of heart failure after the infection was apparently cured.

2. Certain principles of diagnosis and treatment are presented. The problems concerning the use of penicillin in the treatment of bacterial endocarditis are outlined and discussed. A plan for management of patients with bacterial endocarditis is recommended.

3. A more intelligent understanding and assiduous application of these therapeutic principles will aid materially in further reducing the case fatality rate of bacterial endocarditis.

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HEMORRHAGIC GANGRENOUS EXFOLIATIVE DERMATITIS FOLLOWING PENICILLIN IN OIL AND BEESWAX; COMBINED IMMEDIATE AND DELAYED REACTIONS

Report of a Case

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REACTIONS following the topical, oral and parenteral administration of penicillin are legion. Contact allergic manifestations are typically those of dermatitis venenata: erythema, edema and vesiculation, occasionally accompanied by a toxic type of reaction due to absorption. Following parenteral administration the severity of reaction varies from a few wheals to an extremely trying serum sickness type of urticaria[1] associated with arthralgia, nausea, vomiting and diarrhea. Less frequently, erythematous vesicular reactions are observed.[2] Sulzberger and Baer[3] have tabulated the dermatologic side-effects of penicillin:

Bullous eruptions
Burning of the skin
Dermographism
Cheilitis
Eczematous eruptions
Exfoliative eruptions
Herpes simplex
Maculopapular eruptions (morbilliform, scarlatiniform, etc.)
Pityriasis rosea-like eruptions
Stomatitis
Urticaria (including angioneurotic edema and serum sickness-like reactions)
Urticarial eruptions in tinea cruris areas
Vesicular eruptions in tinea cruris areas
Profuse sweating
Vesicular "id"-like eruptions of the hands and feet (dermatophytosis and dermatophytid areas)
Pruritus

The purpose of this paper is to report an unusual hemorrhagic and superficial gangrenous reaction followed by exfoliation after one injection of penicillin in peanut oil and beeswax, and to note an extremely early onset at 6 hours (immediate reaction) followed by a delayed reaction of the serum sickness type on the eleventh day. We are unable to find literary reference to gangrenous penicillin eruptions. Universal exfoliation is a rare complication of penicillin therapy. Everett J. Gordon[4] lists exfoliative dermatitis of the palms in his cases as a sequel to such treatment.

REPORT OF CASE

Mr. J. R., a white man aged 56, received 1 injection of 300,000 units of penicillin in an oil and beeswax vehicle by intramuscular injection on June 22, 1947 for treatment of traumatic cellulitis of the right ring finger and regional epitrochlear lymphadenitis. Within 6 hours he experienced severe generalized itching, which was intolerable over the lower extremities. On the following day there was an acute erythematous macular and maculopapular eruption upon all the extremities and genitalia, most severe upon the legs and thighs. Because the painful cellulitis and lymphadenitis had progressed by the 18th hour after penicillin therapy, sulfadiazine every 4 hours for a total of 8 grams was prescribed. During the next 4 days the eruption progressed through a vesicular stage in these regions followed by the appearance of hemorrhagic vesicles upon the legs and thighs and a few scattered hemorrhagic vesicles upon the trunk, accompanied by bullous lesions in the intertriginous areas. The patient was hospitalized.

During the first week of hospitalization the hemorrhagic vesicles about the heels, lower legs and right popliteal fossa agminated, ulcerated and exposed black superficial gangrenous bases. The temperature remained normal until the 10th day after penicillin therapy and then rose to 99.8°F. The affected areas were exquisitely tender. On the following day edema and erythema of the face and eyelids was noted, and together with general malaise and apathy indicated a delayed serum sickness type of reaction. Within the second week of hospitalization there was gradual improvement of the gangrenous lesions, but new hemorrhagic vesicles appeared about the ears, neck, and elbows, and ulceration followed. During the course of the eruption vesicles appeared profusely over the extremities, neck and face and were particularly agminated upon the webs of the toes, where there had been a moderate dermatophytosis. The peak of the dermatosis was apparently reached between the 15th and 20th days, and gradual subsidence followed during the next fortnight with healing of all lesions and exfoliation of almost the entire skin in extensive keratinous sheaths. All the lesions healed completely in the following month. The superficial gangrenous areas filled in with very slight atrophy.

Treatment consisted of the administration of benadryl and pyribenzamine, both of which were of no apparent value, and the topical applications of potassium permanganate solution and an emollient absorbent paste consisting of aluminum acetate, anhydrous lanolin and zinc oxide paste.

Laboratory data revealed 11,450 white blood cells with 86 per cent polymorphonuclears and 2 per cent eosinophiles on June 22, 1947 (on admission) and 13,200 white blood cells with 67 per cent polymorphonuclears and an eosinophilia of 6 per cent on July 2, 1947, the day the delayed reaction was noted.

COMMENT

Because of the intensity of the reaction it was deemed inadvisable to give the patient penicillin even in small doses. However, when he imbibed freely of peanuts and honey, there was no reaction. It is possible that the sulfonamide he received prior to the peak of reaction further aggravated the symptoms, but it is very doubtful that the severity of the lesions had not been predetermined, since the lesions were intense and well developed at that time. Furthermore, it may be noted that the patient had never received sulfonamides or related chemicals prior to this occasion and was therefore not sensitized.

The mechanism of penicillin allergenicity is particularly interesting in reference to this case because of the moderate dermatophytosis present and the severe local reaction in those regions about the toe webs. Interesting immunologic theories have been espoused by Cormia and Lewis[5] and Peck and Hewitt.[6]

The experiments of Cormia and Lewis included studies on the relationship between penicillin-sensitization and conjoint sensitization to superficial fungous disease. In 45 infants and young children who had never received penicillin and in whom superficial fungous disease was absent the 48-hour type of reaction to an intradermal injection of penicillin was absent. Contrariwise, in a group of adults with chronic superficial fungous disease to whom penicillin had never been given, delayed positive reactions to intradermal penicillin tests were positive in 41 per cent, indicating the nonspecificity of the reaction. Since the reaction was absent in young children, its occurrence on a basis of cross-sensitization to superficial fungous diseases was considered probable.

In a recent paper Peck and his co-workers were able to show that the dermatophytes, including those clearly causing dermatophytosis, were capable of producing *in vitro* antibiotics. One of the antibiotics could be identified as penicillin G. This led them to study the possibility that the unusual high incidence of spontaneous sensitivity in patients to penicillin might be due to the

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TEMPORAL ARTERITIS

Critical Review of the Proven Cases with Report of an Additional Case with Pernicious Anemia*

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SINCE the original description of arteritis of the temporal vessels by Horton, Magath and Brown[1] in 1932, some 52 cases have appeared in the literature, diagnosed either clinically or by biopsy and/or autopsy material. The original papers indicated a complete recovery in all cases. Since that time, however, the close association of temporal arteritis with serious ocular sequelae and even permanent blindness, as well as deaths in proven cases in which arteritis of other vessels could not be completely ruled out, has enhanced the clinical importance of this disease. For this reason as well as because of the growing importance of geriatrics as a science, into which group of diseases this affliction would appear at this time to fall, it was decided to review carefully the facts concerning it thus far available in the literature. There it was found that, of the cases reported, some were completely lacking in detail and others, while seemingly bona fide cases from the clinical reports, had had no confirmation by biopsy or autopsy. Although several excellent reviews of all the cases were available, none attempted a division into those that were scientifically proven and completely reported and those that were not. Only 34 cases, including our own, fall into this group, and this paper presents a critical and statistical review of these. The criteria for diagnosis in these cases will first be outlined, following which the known facts will be presented under appropriate headings. Only in this way can the solution of several problems still existing concerning this entity be properly approached.

Our case is entirely similar to those previously reported but is interesting chiefly for the fact that the patient had pernicious anemia, with which disease temporal arteritis has never before been reported.

REVIEW OF THE LITERATURE

Definition. Temporal arteritis is a relatively rare disease of unknown etiology occurring predominantly in females of the seventh decade and characterized by a prolonged prodromal period of nonspecific symptoms before the development of thickening and tenderness of one or both of the temporal arteries which show chronic arteritis.

Incidence. The disease has not been reported as occurring in other than members of the white race. No confirmed case has been reported outside the United States, England and Canada. There appears to be no seasonal incidence. Of the 34 cases under consideration here, 23 have been females and only 11 males, an incidence of 2:1. Of greatest interest is the rather strict age limitation, 55 to 74, the average age being

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66.8 years. Only 11 patients were not in the seventh decade (table 1). One case of a female of 80 years (Johnson, 1943) has been omitted because of lack of details. Horton, Magath and Brown[1] indicate that no cases had been seen at the Mayo Clinic before their own 2 cases of 1932. Since that time only 32 additional casse have been reported.

Etiology. The etiology remains unknown despite much interesting speculation on the subject. Certainly the clinical signs of fever, anorexia, night sweats and weakness, as well as

TABLE 1

Cases of Temporal Arteritis Proved by Biopsy or Autopsy

	AUTHOR	CASE NO.	SEX	AGE	BLOOD PRESSURE	MAX. TEMP.	RBC MILL. PER C.M.M.	HB. PER cm.	WBC PER C.MM.		SED. RATE, MM. PER HOUR
1	Horton, Magath and Brown[2]	1	F	65*	190/100	103°F.	3.6	40	13,000	Biopsy	
2		2	M	68	165/90	100°F.	3.7	80	10,000	Biopsy	
3	Horton and Magath[3]	1	F	69†	—	—	—	—	—	Biopsy	
4		3	M	72†	—	—	—	—	—	Biopsy	
5		5	F	68†	—	—	—	—	—	Biopsy	
6	McDonald and Moser[4]		F	60	160/110	101.8°F.	3.5	71	8,600	Biopsy	
7	Jennings[5]	1	F	66	160/80	98.4°F.	5.2	84	13,000	Biopsy	108
8	Bowers[6]		F	65	130/70 230/120	101.4°F.	4.07	80	12,450	Biopsy	28
9	Sprague and MacKenzie[7]		M	66	150/85	Elevated	3.4	83	12,900	Biopsy	28
10	Dick and Freeman[8]	1	F	65	—	100.4°F.	4.5	73	13,000	Biopsy	
11	Hoyt, Perera and Kauvar[9]	1	F	58	118/62	103°F.	—	80	14,000	Biopsy	70
12		2	F	61	130/80	101°F.	2.7	80	14,000	Biopsy	
13		3	M	67	195/100	98°F.	—	—	—	Biopsy	
14	Scott and Maxwell[10]		F	70	110/70	101.4°F.	4.0	65	7,600	Biopsy	21
15	Sproul[11]		M	68	—	—	—	—	17,000	Autopsy	116
16	Plaut[12]		F	63	—	elevated	—	—	—	Biopsy	
17	Murphy[13]		F	71	190/100	—	—	100	7,500	Biopsy	12
18	Johnson, Harley and Horton[14]	1	F	61	—	elevated	low	—	—	Biopsy	
19	Chasnoff and Vorzimer[15]		F	63	142/62	101.8°F.	2.4	60	9,000	Biopsy & Autopsy	85 (45 min.)
20	Brown and Hampson[16]		M	61	150/80	—	3.67	62	7,200	Biopsy	13
21	Shannon and Solomon[17]		M	73	150/90	normal	4.25	90	7,750	Biopsy	102
22	Vandivier and Ritchey[18]	1	F	73	170/100	—	—	—	14,000	Biopsy	
23		2	F	74	170/80	100°F.	low	—	—	Biopsy	
24		4	F	69	160/70	101°F.	low	—	12,000	Biopsy	
25	Kilbourne and Wolff[19]		M	68	140/90	38°C.	—	—	13,600	Biopsy	
26	Cooke, Cloake, Govan and Colbeck[20]	1	M	66	130/80	100°F.	4.79	96	11,850	Biopsy	
27		3	F	69	190/105	normal	3.94	72	5,100	Biopsy & Autopsy	
28		4	M	71	150/95	normal	4.20	60	8,400	Biopsy	
29		5	M	69	180/90	99.4°F.	4.85	98	10,500	Biopsy	
30		6	F	73	145/70	normal	3.96	74	8,350	Biopsy & Autopsy	
31		7	F	68	140/80	103°F.	4.30	80	13,000	Biopsy	
32	Curtis[21]		F	71	130/80	101.8°F.	low	—	9,200	Biopsy	44
33	Dantes[22]		F	55	130/74	103°F.	low	68	10,550	Biopsy	18
34	Protas and Saidman		F	70	130/70	99.2°F.	4.0	92	11,100	Biopsy	53

* Age tabulated from first admission gives age 65, and not 55, as quoted in other articles on temporal arteritis.

† Included, despite dearth of details, out of deference to original authors.

the rubor, tumor, calor and dolor of the temporal artery, the leukocytosis and the pathologic findings would seem to point to an infectious origin, but thus far repeated cultures and microscopic examinations of blood and biopsy sections have failed to show any organisms other than probable contaminants.[1, 4, 6, 8] Repeated blood chemical examinations and agglutinations as well as spinal fluid examinations, urinalyses, X-ray films, and other laboratory tests have only served to exonerate syphilis, tuberculosis, typhoid and paratyphoid fevers, and brucellosis. Horton and Magath[3] suggest that "The advanced age of the patients suggests that these changes in the arteries may be one of the fruits of senility. The changes might even be brought about by small infarcts in the vascular wall due to thrombosis of the vasa vasorum." This thrombosis is probably better placed on an inflammatory basis as suggested by Cooke and his co-workers.[20] Kilbourne and Wolff[19] point out the high incidence of preceding or concomitant evidence of infections about the head in the forms of gingival ulcerations, diseased teeth, and oral and sinus infections. They point out that 1 patient recovered soon after tooth extraction[3] and postulate direct extension of the local infection to neighboring arteriosclerotic arteries. Our own patient complained of sudden onset of an upper respiratory infection when first seen. Kilbourne and Wolff[19] discuss the possibility of an allergic basis but rule this out because of "(1) the rarity of eosinophilia, (2) the advanced age of the patients affected, and (3) the localized distribution of the arteritis." Most writers agree that the etiology is probably infectious in origin, but its exact nature remains yet to be elucidated.

Pathology. This is limited by definition to include necrosis of the media in which foreign body giant cells are found. The general lesion is one of chronic periarteritis and arteritis in which there may be an infiltration of round cells in the adventitia around the vasa vasorum and also in the media of the vessels. There may be complete necrosis of the media, which is frequently replaced by a granulomatous type of lesion. The most interesting feature here is that such a relatively distinctive type of lesion is found in a group of cases all presenting similar clinical features. Cooke and his co-workers[20] have presented what is considered to be the best description to date. They postulate that the reaction is inflammatory in type and appears to start in the adventitia, from which it proceeds to the media where it tends to spread in an axial direction, especially in the larger vessels. Prior to this, however, there occurs a focal necrosis of the media and internal elastic membrane, at which stage some of the cases stop and healing takes place. In most cases, however, the process spreads to the media, where the necrosis excites a giant-cell reaction. Surviving strands of elastica give rise to new internal laminae, whose new fibers tend to segregate the granulation tissue of the media into islands causing a superficial semblance to tubercles. The intima always shows a marked thickening but rarely shows any signs of inflammation. In the smaller vessels these changes are usually followed by thrombosis.

These changes are not limited to the temporal arteries as was shown by Cooke et al, in whose autopsy reports involvement was found in the aorta, femoral, mesenteric, radial and retinal arteries, and also in the autopsy report of Sproul's case,[11] in which typical changes were found in the aorta, carotid, innominate, subclavian, pulmonary, celiac, mesenteric, renal and iliac arteries. Unfortunately the cerebral vessels were not examined in this case. Chasnoff and Vorzimer[15] report a typical case in which autopsy details are not yet available but changes similar to those seen in the temporal arteries were seen "in other vessels." Of particular interest are 4 cases reported by Gilmour[23] and 2 by Sproul and Hawthorne[24] in which at autopsy changes similar to those outlined above were noted but with none of the clinical symptoms of temporal arteritis. Gilmour's first patient was too young to be considered as a member of this group and probably represented a case of tuberculous

Physical examination revealed many small pea-sized tumors of the consistency of fat distributed over both temporal regions, particularly on the left. These were painful to touch and seemed generally distributed along the course of the temporal vessels. There was no local increase in temperature or discoloration in the region of the masses. Because of pain in the temporomandibular joints and the submandibular region, the patient was unable to open her mouth completely. The submaxillary and left anterior cervical lymph nodes were enlarged and painful, but no other lymphadenopathy was noted. There was a soft systolic murmur at the apex of the heart and an occasional extrasystole. The lungs and abdomen were negative to examination. Neurologic changes in the lower extremities consistent with pernicious anemia were noted. The temperature was 99.2°F., the pulse rate 78, the respiratory rate 18, and the blood pressure 130/70.

The blood count revealed 4,000,000 red blood cells with 13.2 grams (92 per cent) of hemoglobin, and 9,200 white blood cells, with 77 per cent neutrophils, 22 per cent lymphocytes and 1 per cent basophils. The sedimentation rate was 53 mm. in 1 hour (normally 10 mm.). An electrocardiogram was normal except for occasional ventricular extrasystoles.

Two treatments of short-wave diathermy, 15 minutes each, to the neck produced only slight decrease in tenderness of the cervical lymph nodes.

Because of persistence of pain over the nodules of the temporal regions and more especially the pain in the submaxillary nodes and the left anterior cervical lymph chain, diagnostic biopsy of a nodule in the left temporofrontal region was performed on the second hospital day. The pathologic report was as follows:

Section through the 8 by 4 mm. nodule reveals the center to be open and to contain a small amount of blood. The lumen is lined with endothelium, under which there is considerable proliferation of the intimal tissues. In the wall of the vessel there is a considerable amount of inflammatory reaction consisting of many lymphocytes, plasma cells, and a few foreign-body giant cells. There is also some chronic granulation tissue which is obliterating much of the identity of the wall. The muscular tissue shows some necrosis and degeneration and there is also replacement by collagenous fibrous connective tissue. The outer wall shows extension of the inflammatory process, and considerable fibrous tissue is being laid down in these areas. In one portion of the section there is a vessel which is apparently occluded by this inflammatory process and shows early organization. This is what appears to be a temporal arteritis as described by Horton and Magath in 1932. Of lesser consideration are the specific granulomata, amongst which are syphilis, tuberculosis and chronic mycotic processes. There is nothing in the tissues to indicate a specific etiology, and if there is no substantiating evidence for any of the specific infections it can probably be dispensed with. Temporal arteritis is ordinarily a relatively benign affair, involving only the extensions of the temporal artery and producing no severe symptoms. They are generally considered to be degenerative processes.

Within a few days following the biopsy, the pains subsided and the left anterior cervical nodes became smaller and less tender, but the submaxillary glands on both sides remained enlarged and tender, especially on the left. The latter did not subside until 10 days postoperatively and even on that day the left was still slightly tender.

Postoperative laboratory examinations showed entirely normal urinalysis, negative blood Wassermann and Kahn reactions, and a white blood cell count of 7,800. An X-ray film of the chest showed emphysema in both lungs and considerable scarring in both bases but no other evidence of disease in either lung field. The sedimentation rate 10 days postoperatively was 33 mm. per hour.

The postoperative course was uneventful except for persistence of swelling and tenderness in the left submaxillary region, for which penicillin, 300,000 units in beeswax every 12 hours for 3 doses, and sulfadiazine in adequate doses were apparently ineffective. The greatest relief seemed to be obtained from short-wave diathermy. One month after operation the temporal nodules had disappeared completely and the patient was symptom-free except for slight pain on palpation of both submaxillary glands, especially the left. Two months after operation the patient was entirely free of temporal and cervical symptoms and masses.

Discussion

Several interesting speculations concerning the nature of temporal arteritis emerge from the foregoing observations. First, it seems that there exists a separate type of arteritis, different from any described previous to 1932, in which the clinical symptoms are most evident in the temporal arteries and which affects elderly females to the greatest extent. The prodrome is frequently vague, and during this time many persons such as the dentist, the ophthalmologist, the otolaryngologist, and even the internist may be consulted for a diagnosis. Because of the possibility of permanent blindness, all these specialists should be acquainted with this synso vague as to render the diagnosis difficult, but this diagnosis should always be suspected in an elderly white female with eye changes and or night sweats and fever. However, once the typical arteritis develops, the diagnosis then limits itself to only a few of the known types of inflammation of the peripheral arteries. Such diseases as tuberculosis, syphilis, inflammations of the scalp, sinusitis, fibrositis, dental caries, and cerebral vascular accidents may at first be confusing but are soon readily ruled out. However, not so easily disposed of are rheumatic fever, thromboangiitis obliterans and periarteritis nodosa. Rheumatic fever is usually differentiated by the age of the patient and the absence of rheumatic nodules. Periarteritis nodosa is more commonly found in young men, aged 10 to 40,[26] and is usually fatal, headaches are rare, aneurysms are common, cardiac and abdominal symptoms are usual, polyneuritis and eosinophilia are frequent, and ocular signs are rare. If, in addition, gangrene is noted, the diagnosis of periarteritis nodosa should offer no difficulty.

Thromboangiitis obliterans is confined almost entirely to men between the ages of 25 and 45 years. Headache is common, but the manifestations are usually confined to the arteries and veins of the legs. Intermittent claudication is a frequent complaint, and gangrene frequently causes loss of the lower limb.

These points should serve to differentiate temporal arteritis, but it must be admitted that because of the paucity of information existing concerning all these diseases, only in typical cases can they be easily distinguished. Many authors believe that they are not all separate entities, but we believe with Weiss[26] and others that time will show that they are.

Treatment. The most disconcerting symptom which confronts the clinician is the severe and intractable headache, and for this a great multitude of procedures have been unsuccessfully employed. These include the use of potassium iodide and dicalcium phosphate, liver, thiamine chloride, sodium iodide, sodium salicylate, codeine and morphine, phenobarbital,[6] cobra venom,[13] and phenacetin,[9] all to no avail. X-ray therapy was ineffective in 1 case.[22] Because of the apparently infectious nature sulfanilamide was tried in 2 patients[8, 9] and sulfapyridine in 1,[9] but all 3 patients showed sensitivity to the drug before adequate treatment could be completed. However, no satisfactory result appeared to be in the making. Penicillin was tried in 1 case[18] but seemed to be of no value. Section of the temporal artery for biopsy produced partial or complete relief, particularly of the headache, in all but 3 cases.[7, 18] The other reports either make no mention of the symptoms following the section or else comment on the relief. Bowers[6] believes that the relief obtained by this measure is due to interruption of the pain pathways of the sympathetic nervous system. Curtis[21] suggests that because of the infectious nature of the disease penicillin or streptomycin should be tried and also that heparin or dicumarol should be used to prevent thrombosis.

Supportive therapy, such as the use of liver and iron for anemia, salicylates for joint pains and mild headache, vitamin B_2 for neuritis, and nicotinic acid for vasodilatation, as well as treatment of other coëxisting diseases should be employed as necessary. In our case shortwave therapy was found effective in reducing pain and swelling of cervical glands during the recovery period.

REPORT OF CASE

H. E., a 70-year-old married woman, was first seen at the office on August 30, 1946. She had been well until 3 weeks before, when she first noticed small painful nodules on the left side of the skull and pain over the whole head. Shortly thereafter new nodules were noted, particularly in the occipital region. Three days before, swelling of the left anterior cervical lymph chain was noted with rhinitis and pharyngitis and pain on swallowing and on opening the mouth.

The past history revealed the patient to have been suffering for 7 years with pernicious anemia, for which she was receiving adequate therapy. The remainder of the past history and the family history were noncontributory.

to disappear. Evidence of thickening of other arteries was recorded in 5 cases as follows: brachial and radial,[8, 20] brachial,[17] radial,[20] and femoral.[20]

Important were the cerebral and the ocular symptoms. The headache is invariably of throbbing nature and is usually associated with other pains about the scalp, which at times render the patient unwilling to place his head upon a pillow. It does not usually respond to the use of ordinary analgesics and has even been known to be resistant to cobra venom.[13] When the temporal arteries are affected the headache is frontal and parietal, and if the occipital arteries are involved it is usually restricted to the neck and back of the head. The pain is frequently aggravated by coughing and sneezing. The headache frequently responds dramatically to resection of a portion of the temporal vessel.

Cerebral symptoms that are not readily explained have been noted in several of the cases. Sprague and MacKenzie[7] report that their previously alert male patient was considered mentally retarded and sluggish 5 months after his biopsy, although he had improved in all other respects. In case 3 of Cooke at al[20] the patient was disorientated and at times delirious for about 8 weeks, but following nicotinic acid therapy her mental condition improved. In case 6 the patient had vertigo, deafness, mental confusion and incontinence for a week, following which there was some clearing of the symptoms for a 5-day period. In Bowers' case[6] coma was noted for 5 days 1 year after her discharge from the hospital, but at this time hypertension and fasting blood sugar of 183 milligrams were also noted.

The ocular symptoms are important because of the blindness which seems to be a complication of this disease. Of the 34 patients 15 showed visual impairment of some kind, 9 of which were left with complete permanent loss of vision in one or both eyes. Usually, the findings in the fundus are out of all proportion to the clinical symptoms. Exudations and hemorrhages are frequently noted, but more usually in the cases of blindness there is some impairment of the circulation. As an explanation of the circulatory impairment, Post and Sanders[25] believe that "the evidence of occlusion in the retina was insufficient to explain the complete loss of vision, so this must have occurred in vessels too far back to produce fundus lesions." In case 6 of Cooke et al[20] in which the patient had complete loss of vision following diplopia and primary atrophy of both disks, involvement of the retinal arteries with the typical lesion of temporal arteritis was found at autopsy. These arteries were obliterated by fibrous tissue formed during organization of a thrombus. This would appear to establish the pathogenesis of the blindness.

Although the acute symptoms subside promptly, usually after biopsy, the generalized vague symptoms frequently persist for months despite vigorous symptomatic therapy. The symptoms have been known to last as long as 20 months. In our own patient the pain and swelling of the salivary glands persisted for 6 weeks, and malaise and weakness were present for almost 3 months.

Prognosis. At the present time this disease is felt to be self-limiting, but relapses may occur.[2, 17] None of the fatalities have been definitely attributed to the arteritis, and complete recoveries are recorded. Loss of vision has been permanent, but the temporal vessels appear to lose their thickness and redness and there is usually a return of pulsations, probably indicating complete recovery.

Complications. Despite the advanced age of the patients under discussion, only 9 showed evidence of hypertension. Three patients had diabetes mellitus, either before or immediately after their attack of temporal arteritis.[6, 10, 11] Even more surprising is the fact that only 2 patients gave a history of angina pectoris.[11, 19] Our patient is the first to be reported in whom temporal arteritis is recorded in a case of pernicious anemia.

Differential diagnosis. During the prodromal period the symptoms of temporal arteritis are arteritis, but the remaining cases are similar enough to lead us to believe that these pathologic changes occur in vessels other than the temporal arteries. Also indicative of involvement of other arteries but not as conclusive are reports of pains or swellings in other areas such as the arms and legs,[5, 10, 20] back, shoulders and groin,[15] knees and shoulders,[16] muscles of the neck,[20] and innumerable references to various aches and pains about the head and face. Horton and Magath[3] felt that the severe headache indicated involvement of the cerebral vessels.

Clinical pathology. Exhaustive laboratory studies have been carried out on the 34 cases we are reviewing. Both biopsy and autopsy sections have been searched by means of various stains and cultures, but no consistent organism has been found. Blood cultures and spinal fluid examinations have been repeatedly negative. Agglutinations for typhoid, paratyphoid A and B, undulant fever, tularemia, brucellosis, and sheep cell agglutinations have been negative. Blood complement fixation tests for syphilis and gonorrhea as well as tuberculin skin tests have been negative. Several gastric analyses and gastrointestinal X-ray examinations have yielded no positive findings. Many electrocardiograms have shown only those changes consistent with the age of the patient. X-ray films of the chest and skull as well as the temporomandibular and other painful joints have yielded no clues. Urinalyses have been consistently negative, as were renal and liver function tests in a few cases. Many different blood chemical determinations have been made, but there has been no consistent departure from the normal. In several cases basal metabolic rates have been determined, and these have been in the low normal range. In 10 cases the sedimentation rate has been specifically mentioned, and in 7 of these the rate has been markedly elevated. Blood counts have shown a fairly consistent secondary anemia ranging from 2.7 million to normal and a generally elevated white blood count never exceeding 17,000 and generally ranging around 10,000 to 12,000 (table 1). Bowers[6] noted eosinophilia, and Hoyt, Perera and Kauvar[9] found 4 per cent of eosinophils in their first case. Cooke et al[20] noted 6 per cent of eosinophils in their case 5. In the remainder of cases eosinophilia is not noted or not reported. Kilbourne and Wolff[19] mention specifically stool examinations, and these were also negative. Thus, a review of the laboratory findings shows only anemia and leukocytosis with frequent elevation of the sedimentation rate. This is particularly of note because of the age group with which we are dealing.

Symptoms and signs. All of the patients in this series noted severe headaches occurring most frequently at night and usually of such degree as to interfere with sleep. Many also noted various pains and aches about the scalp, face and neck, particularly during the prodromal stage. Painful mastication was noted by 24 of the 34 patients and in many cases was so severe as to interfere with eating. In our own case this complaint was such that adequate examination of the pharynx was not possible. Other symptoms listed in the order of their frequency were as follows: weakness in 18, anorexia in 14, night sweats in 13, loss of weight in 11, malaise in 9, fleeting joint pains in 9, and nausea and vomiting in 2. Cooke et al[20] noted intermittent claudication in 2 of their cases.

Thickening and tenderness usually accompanied by redness of the temporal vessels was noted at some time or other during the course of the disease by every patient. The presence of nodules was noted in some cases, and pulsations usually disappeared at the height of the disease, returning in most when the redness subsided. Temperature elevation was noted in 28 cases. The elevation was never over 103°F., and usually between 100 and 101°F. In the other 6 cases absence of fever was specifically mentioned (table 1). Cervical lymphadenopathy was noted in 6 cases including our own. In our case there was also swelling of the salivary glands, which, along with painful cervical lymphadenopathy, proved to be one of the last signs drome, even though as yet no specific treatment is available. The greatest controversy concerns the etiology which is still unknown. Most of the writers agree that because of the symptoms and clinical findings an inflammatory basis is the most logical explanation, but we believe that because of the uniformly advanced age of all the patients an arteriosclerotic basis may emerge as a contributing factor, particularly since exhaustive studies have thus far failed to ferret out the etiologic agent. From a purely statistical standpoint, however, we cannot escape the observation of Kilbourne and Wolff[19] concerning the presence of infections about the head in many cases. Certainly further observations of proven cases are needed to establish the etiology.

The earlier papers on the subject of temporal arteritis indicated that the disease was only local in nature as indicated by the title itself, but further observations have now proven that this is not the case. Typical changes have been found in many other arteries, large and small, both in cases of this disease as well as in a few cases in which no complaints referable to arteritis were present. This would seem to establish the fact that the temporal arteries are merely a local manifestation of a systemic disease as first postulated by Hoyt, Perera, and Kauvar.[9] The reason why the local manifestations are so uniformly seen in the temporal artery would seem to be because it is the most superficial artery of the skull and for that reason its close anatomic relationship with the subcutaneous areas of the scalp are different from the other major arteries of the body. We believe that this close association with the subcutaneous tissues produces the symptoms in this region, whereas other arteries known to be similarly affected are relatively quiescent.

Therapy of this condition has been disappointing. Certainly biopsy should be performed not only for diagnostic reasons but mainly because such a procedure seems to turn the tide of the disease. This would seem to be the only measure by which we may be able to halt the blindness which is irreversible once developed, and which is being reported in greater frequency as more cases are discovered. This significant but irreversible complication, blindness, and the possibility that biopsy will prevent its occurrence seems to us to make early diagnosis and biopsy with contingent recognition of the disease by the physician who first sees the patient an essential part of its prevention. We agree with Curtis[21] that penicillin, streptomycin, heparin, and dicumarol should be given complete clinical trials. In cases in which there is objection to biopsy or failure of response, a small amount of 1 per cent procaine hydrochloride should be infiltrated in the periarterial tissues preferably at the site of greatest pain. Certainly supportive measures such as the use of liver and iron, thiamine chloride, and nicotinic acid should be employed to their therapeutic limits, particularly during the recovery period.

It is interesting to speculate on the fact that no cases have been seen in other than the white race and that no cases have been reported and confirmed other than those from the United States, Canada and England. We know that an unconfirmed case has been reported from Uruguay[3] and another from France, but even these 2 cases would not represent what would seem to be their fair share. We believe that there are more cases in other countries than have been reported or recognized and that there are probably many unrecognized cases in this country and in England.

The name "temporal arteritis" is certainly no longer an adequate one for this disease in view of conclusive evidence that the arteritis exists in other arteries and probably exists in other arteries without involvement of the temporals. Several other more appropriate titles have been suggested, but somehow the original title has been retained, and we have used it primarily for the sake of uniformity. We feel, however, that a more appropriate and descriptive title should be used and we suggest "idiopathic giant-cell mesarteritis." This seems to describe the pathology more completely, and admits both the generalized nature of the disease as well as the unknown etiology. We feel that this title is as far as our present knowledge will allow us to go.

Summary

1. The literature of 34 pathologically proven cases of temporal arteritis is critically reviewed and tabulated.

2. A typical case is presented in which temporal arteritis is the first to be reported in association with pernicious anemia.

3. Temporal arteritis is a specific disease entity occurring in aged white persons and characterized by headache, loss of weight, painful mastication, fever, anemia, leukocytosis, and typical pathologic findings. The headache appears to be due to the subcutaneous location of the temporal arteries.

4. Much has yet to be learned about therapy in this condition, but the newer antibiotics as well as the anticoagulants should be given a clinical trial. Periarterial infiltration with procaine is suggested.

5. Early recognition and excision of part of the artery seems to be the only method to prevent blindness, which is being more frequently reported as a complication.

6. The etiology would appear to be infectious, but arteriosclerosis is felt to be a contributing factor.

7. The temporal symptoms are a manifestation of arteritis in other arteries, and therefore the disease should be called "idiopathic giant-cell mesarteritis," since this is more descriptive.

We wish to thank Dr. Zigmond M. Lebensohn, who referred the patient to us.

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President's Page

CHALLENGES IN 1948

In the opening days of 1948, it seems prudent to evaluate our position and to make plans for what may well be a critical period in our history. There is little doubt that President Truman's January message to Congress will concern itself with health services. With the presidential election in the offing, each candidate will be promoting his particular ideas along health lines. Congress will also have before it revised versions of the Wagner-Murray-Dingell bill and the Taft National Health Act.

As physicians well know, there is already a vast program of Government medicine. In addition, there is an ever-growing tendency among hospitals and other institutions and groups to enter into the actual practice of medicine through the employment of physicians and the disposal of their services at a profit to themselves.

It should be evident therefore to even the most casually interested physician that the fate of medicine as practiced today is in the balance. A most important question will have to be answered, is our future to be determined by governmental agencies, hospitals and other institutions and groups, or are we, who should be best qualified, to continue to make our own decisions?

We should recognize that changing times and habits bring about alterations in our established methods of practice. Consequently we should be the first to seize the opportunity to lead in bringing about the changes which the facts justify. Had our methods been perfect, the Government and other agencies could never have encroached on our field so successfully as they have. Are we to sit meekly by and see a system destroyed which has produced the finest physicians and medical institutions in the world?

It is high time for our profession to recognize its shortcomings and do something about them. We should vigorously oppose anything that tends to lower the standards of medical practice. At the same time, if we are to assume our responsibility fully, we must offer real leadership in devising methods for making our services more readily available to all the people.

Raymond T. Holden

Editorials

YOUR RESPONSIBILITY*

Too frequently we doctors are a short-sighted lot. We tend to forget the dual nature of our responsibility—that obligations rest upon us as citizens as well as medical men.

Doctors of the District of Columbia, I am afraid, have overlooked their civic duties with respect to District institutions for the care of the sick and aged, maintained by public funds. It was my privilege to visit these institutions recently and make a report to the District commissioners. What I saw was not pretty. Of the seven now functioning in the District, four are discouragingly inadequate.

In the psychopathic division of Gallinger Hospital I found the care of the patients so substandard that I hesitate to dignify it as psychiatric care. The place was woefully understaffed; more doctors, nurses and attendants are needed. It was not uncommon to find patients shackled to their beds. Certainly the records do not indicate that there was sufficient study and early treatment of the psychopathic patient.

At the Receiving Home for Children on MacArthur Boulevard I found the kitchen and dining-room facilities so inadequate that it was an impossibility to feed the children properly. Here again the problem was personnel shortage. The Superintendent of the Receiving Home is, in my opinion, an earnest and sincere individual.

I also inspected the Home for Feeble-minded at Laurel, Maryland, another District institution. Additional physicians and nurses are needed in order to carry out an adequate medical program. I found security provisions lacking as evidenced by the number of abscondings. Furthermore, I am certain there are many feeble-minded patients in the District who need institutional care and cannot get the attention they need.

At the District Home for the Aged I found the usual shortage of medical facilities. The kitchen and dining provisions are cramped and impractical. The buildings themselves are old and tired; to me they appeared to be potential fire-traps.

At only three district institutions did I find no flagrant failings in the public service: the National School for Colored Girls, the Industrial Home School for Colored Boys, and the Municipal Lodging Center.

I wish that all doctors in the District would make this same trip through these institutions. I know that their suggestions and observations could help bring these organizations up to our national ideals of decency and humanity. In many ways, the right program for improvement can be developed only by men who have medical experience. That is why I urge you doctors to become interested in these public institutions.

I wish that the Medical Society would develop a program of regular inspection trips, that it would foster a policy and a plan toward improving these institutions. I would like to see a special committee of the Medical Society tackle this project, frame a program, follow up the progress through the District Commissioners and Congress.

I can promise you all the coöperation possible from those of us in the Congress who are aware of the situation. But we need your active participation in order to bring this worthy need before our colleagues with sufficient emphasis. Both the District Commissioners and the Congress, under the pressure of normal business, are inclined to be slow to recognize and take steps to improve conditions of the sort that prevail in these District institutions. I believe the obligation falls upon us doctors, as good citizens, to seize the initiative for progress in these areas peculiarly pertinent to our profession.

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* This is the twenty-second in a series of guest editorials by distinguished physicians and laymen. Dr. Miller, who is licensed as a physician in the District of Columbia, is now serving his third term as a member of Congress. He is Chairman of the House District Committee on Health, Welfare and Education. He was formerly State Health Director in Nebraska, and served four years in the Unicameral Legislature of that state.

Not all of the District's medical men, I recognize, remain oblivious to these sins in our public institutions. I call attention to the editorial in the October MEDICAL ANNALS by Dr. Isadore Rodis. Dr. Rodis points out some of the abuses and shortcomings in the psychopathic division at Gallinger Hospital. He was appalled by conditions there, as any human being must be, and came away with some practical, hard-hitting suggestions toward a plan for improvement.

This is the right approach. But Dr. Rodis' voice must be supplemented by hundreds more. The same searching light must be turned on all of the District's institutions until the authorities in charge cannot avoid the urgency and necessity for change.

We have been examining the doctor's role in relation to government institutions. That problem is most imperative at the moment, but it is far from being the only area in which the physician should discharge his civic responsibilities. All public health work and many of the activities of social workers ought to be integrated closely with medical science. Your Government needs and deserves the benefit of your "outside" experience in developing these programs.

I urge doctors to maintain a continuing interest in the general public welfare. May I stress again that many government agencies can receive certain types of advice and recommendation only from men of medical experience!

I know medical men can be a powerful influence in directing public opinion; but they must accept the challenge. And it is a challenge to doctors! Will we remain indifferent, devoid of ideas and suggestions, apathetic toward these pressing problems in our own community?

A. L. MILLER, M.D., F.A.C.S.
Representative from Nebraska

RADIOLOGY AND THE AMERICAN REGISTRY OF PATHOLOGY

Roentgenology when reduced to its essence is actually the clinical study of gross living pathology in terms of shadows cast by the roentgen rays. In the growth of the specialty over the past fifty years there has been a gradual correlation between roentgenologic findings and gross pathologic and anatomic changes in the human body. Limitations of examination of various organs due to insufficient variations in their radiographic densities have been largely overcome by the use of various contrast media to the extent that there is now no body cavity or hollow viscus that cannot be examined roentgenologically. Furthermore, "signs," "shadows" and "criteria" have been replaced by actual demonstration of the size, shape, location, relationships and in many instances even the consistency of the pathologic lesion; e.g., a lesion in the lung is no longer referred to as a "shadow" or "spot" but rather a description of its gross pathology is given, such as dilated bronchii, atelectasis, cavitation, calcification or tumor. It is obvious that such a specialty is largely visual and that a multitude of variations of the normal as well as the abnormal will be encountered. It is also evident that the roentgenologist must have a mental image of the pathologic changes seen in various disease processes if he is to fulfill his real duty as a consultant to the physicians who ask him to interpret clinical conditions in terms of the findings revealed by roentgenologic examination.

A tremendous amount of literature has accumulated in the field of radiology both in the form of textbooks and articles. Such writings are illustrated pictorially, but due to the necessary limitation of the number of prints, only the more classical illustrations of disease processes have been included. This has been true to the extent that we speak of the "textbook picture" as something which we rarely see in actual practice. For this reason, most departments of radiology have accumulated what they term "teaching collections." The variations, particularly of the more rare diseases, are limited in the collections which can be accumulated by any single institution, and for years it has been felt that there is a need for a larger, more inclusive central collection which would be available to all.

In our own city of Washington there is an institution which has worked toward accumulation of teaching material for various specialties. This is the Registry of Pathology, which functions under the auspices of the National Research Council and is one of the four major divisions of the Army Institute of Pathology. To date, radiology has not been included in this registry but it can now be announced that a Registry of Radiology has been established. This was implemented through the appointment of a committee by the American College of Radiology on February 10, 1947. This committee consists of Dr. A. C. Christie, Washington, Chairman; Dr. Ross Golden, New York City; Dr. Lawrence Robbins, Boston; and Dr. George M. Wyatt, Washington, Secretary. The College of Radiology appropriated $2,500 a year and directed the above committee to work with Colonel J. E. Ash, Scientific Director of the American Registry of Pathology, and to obtain additional funds for support of fellows in radiologic pathology at the Army Institute of Pathology. The American Roentgen Ray Society appropriated $3,000 a year and the Radiological Society of North America a similar amount for fellowships. The object of these fellowships is to allow young radiologists to work at the Army Institute of Pathology and correlate the roentgenologic and pathologic findings in the vast number of cases which are now filed at the Institute and which are being received daily. Each case will be assembled in the form of a brief case report with reproductions of the original X-ray, photographs of the gross pathologic specimens to explain the X-ray appearance, and photomicrographs when indicated. The material thus accumulated and indexed will be compiled in the form of atlases, film strips, transparencies or lantern slides and will be available for sale or loan to any licensed physician in the United States. For instance, it should eventually be possible for a professor of radiology in one of our large universities or a physician in the most remote village in the country to write to the Institute of Pathology and obtain for study and teaching a package illustrating all of the variations of over 800 cases of chest tumor now on file at the Institute of Pathology. In addition to the diagnostic aspects of radiology, there will also be included eventually a study of the effects of therapeutic irradiation on malignant tumors and other disease processes. (Radiology includes the use of radium as well as the roentgen ray.)

The establishment of the Registry of Radiologic Pathology has been greeted with enthusiasm by radiologists in all parts of the country. It is to be hoped and expected that this Registry will contribute greatly to the advance of knowledge of the radiologists of the entire country and thereby render their daily work of greater value and benefit to their patients and the referring physicians.

George M. Wyatt, M.D.

WE NEED NURSES!

"Where's the nurse?"

Do we ever stop to realize how often we ask that question,—"Where's the nurse?" Do we ask ourselves *why* we ask it? The answers are simple. Too often, she isn't there—and we miss her. We *need* her. Yes, *we*, the physicians, need *nurses*. In this great game of saving life and of preserving health, they're an important part of the team. There is no substitute for an intelligent, conscientious, efficient nurse. All the medical knowledge in the world would be useless to us if we did not have nurses who are intelligent enough to understand what we are doing and to interpret and carry on during the many hours when we must leave our patients in their hands.

We all know that very often the success or failure of an operation depends largely upon the postoperative care given by the nurse.

Most of us know these things. Why, then, don't we acknowledge them once in a while and do what we can to keep the team together? Why not share a little of the glory with the whole team? Maybe the nurse was only doing her job, but everyone likes, and is encouraged by, a little recognition of a job well done. Would it be too difficult to say, "Well, Miss R. N., we worked hard, but we made it," or "That was a nice piece of work; so much depended upon the nursing care?" No amount of money can keep a person in any position which does not give satisfaction. A few words of recognition from the doctors would go far toward supplying that satisfaction, which, more than any other factor, will keep nurses at the bedside.

To help meet the ever-increasing demands for nursing service, we must have over 350 more nurses in the District of Columbia. They must be found. This is not the responsibility of the nursing organizations and of hospital administrator alone—it is our job, too. Don't forget—we need nurses!

If each physician would make it his business to induce one inactive nurse to return to nursing, if only part time, by telling her of our need for her services, our patients could be assured of the care which it has been difficult to procure lately. Physicians' wives, who are nurses, could fill a large gap in the ranks to tide us over this crucial period. Let's talk to them about it.

While we're taking care of the present, let us not forget the future.

Our local schools of nursing should enroll about 350 students in 1948. Recruitment of this number should be easy, if we really make up our minds to help. Each one of us has an opinion of what the ideal nurse should be. Surely, the physician is in a position to know young women who have the qualifications which nurse candidates should have. We, who must leave our patients in their hands, realize that intelligence, health, integrity, emotional stability, a sense of humor, innate courtesy are a few of the qualities which form the background of the nurses who will work with us in 1951. Let us talk nursing to these youngsters. Let us sell the idea of nursing to their parents. They have respect for their doctor's opinion.

Let us convince them that a nurse's training is a preparation for life as well as for a career. A young woman who graduates from a school of nursing today or tomorrow finds herself in a field in which there is very little male competition and, certainly, no overcrowding. She is assured of employment in a profession which offers her the maximum in satisfaction. Opportunities are many, and the graduate who wants to make a career of nursing has many phases of it from which to choose.

We should tell the young woman who is planning marriage as a career that there is no better preparation for marriage and motherhood than a nurse's training. The nurse, during the period of her training, will have acquired poise, judgment, tact, tolerance, self-reliance, sympathy and a profession which no one can take from her. She will have acquired housekeeping skills. She will know how to keep her family well, and how to care for them if emergencies occur.

Undesirable publicity in newspapers and magazines has done much to discourage the young woman from entering the nursing profession. An exaggeration of the negative side of nursing has been given much publicity by those who are not familiar with actual nursing facts. Let us urge these young women to visit at least two schools of nursing, to talk the matter over with the directors of nursing; or advise them to call the Graduate Nurses' Association for information. The latter's Counseling Service will be glad to give the proper guidance.

If we physicians work with the hospital administrators and the nursing organizations, it should be easy to fill the classes in our schools of nursing next year. The question is—"*Will* we do it?" Remember, we cannot afford to have nursing service fail. *We*, the physicians, *need nurses!*

THOMAS F. COLLINS, M.D.

In and Out of Focus

BY THE OBSERVER

General Practitioners Organize

Late in the summer of 1946, the President of our Medical Society received a letter from Dr. P. A. Davis, Chairman of the American Medical Association's Section on General Practice, inquiring if general practitioners in the District had organized a section. If nothing had been done, he requested that the names of physicians who "would be likely leaders of this section when organized" be furnished him. The Society's Executive Board promptly responded by supplying Dr. Davis with a list of general practitioners. Whether he communicated with any of them is not known. At least, many months passed without any evidence of activity.

Within the past few weeks, interest in such an organization has been revived. This time the general practitioners themselves have taken a hand. Alarmed because there are indications that some hospitals are contemplating the withdrawal of their privilege of practicing in these institutions, they have held meetings to perfect an organization as soon as possible. The following officers have been elected: Dr. R. Lee Spire, Chairman; Dr. J. Chester Brady, Vice Chairman; and Dr. Herbert S. Gates, Secretary-Treasurer.

Shortly after its last meeting, the organization notified the Society's Executive Board of its desire to become a section. The Board, at its meeting on November 24, voted favorably upon the request. An amendment to the Constitution and By-laws establishing a Section on General Practice was submitted to the Society at its first meeting in December. It will be presented for final action at a special business session on January 14, 1948.

Your Observer is informed that physicians wishing to belong to the section must actually be engaged in general practice, not limiting themselves in any degree to a specialty. In other words, only bona fide general practitioners are wanted or will be admitted.

There is no doubt that the establishment of this section is overdue. General practitioners have many problems in common, some of them urgently in need of solution. These will now receive long deferred consideration.

It has been announced that the new section will be represented at the Interim Session of the American Medical Association to be held in Cleveland in January. This session is given over to meetings of the House of Delegates and a scientific program for general practitioners. The AMA is to be commended for initiating the latter feature. Adequate measures to provide the general practitioner an opportunity to obtain scientific information which will be of the greatest value to him, it appears, are at last being adopted by the Association.

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Zero Hour for Hospitals

Nineteen of Philadelphia's voluntary hospitals will close their books this year with deficits twice those of 1946. Even hospitals with resources to draw upon are in difficulty. They must adopt severe measures if they are to survive the serious financial crisis confronting them.

"Hospital incomes are fighting a losing battle with rising hospital expenditures." So states *Philadelphia Medicine* for October 11, 1947. "Higher expenditures for wages, medical supplies and food," the publication observes, "are primarily responsible for the mounting deficits afflicting hospitals despite the most strenuous efforts at economy. These expenses have risen 100 per cent since before the War, with 35 per cent of the increase occurring in the last eighteen months. The sky-rocketing price rise in meat and dairy products—both of these are vital in hospital feeding—has hit hospital food budgets particularly hard. And forecasts hold out little hope of any change in operating costs in time to bring outgo and intake into any satisfactory balance in the foreseeable future."

Unfortunately, Philadelphia's plight is not unique. Voluntary hospitals are in a bad way financially everywhere. In New York, for example, deficits have risen 250 per cent over last year. Things are no better in Washington. Here, hospitals are also in a quandary where to turn next for funds to keep their doors open. They are especially troubled by the heavy losses incurred in hospitalizing the medically indigent. Financial provision for their care seems to be entirely inadequate. The Hospital Council recently warned that this situation cannot continue if the voluntary hospitals are to survive.

Although rates for pay patients have gone up and are a heavy burden for the already harassed average earner, they have not kept pace with expenses. Hospital administrators point out that if they were relieved of the indigent, or at least the losses incurred in their care, they might possibly make a go of it at present rates. Some take the position that the local government should dig deeper in its pockets for the indigent who, after all, are its responsibility. The Community Chest has and should continue to do its share, but its efforts need to be supplemented.

Obviously, the difficulties of the voluntary hospitals will not be readily solved. *Philadelphia Medicine* offers these suggestions to its hospital officials:

> "(1) Hospital management and trustees must reassure the public that deficits are unavoidable under present conditions, and explain more graphically the causes of mounting hospital costs, and
>
> "(2) Philadelphia men and women must decide whether they are willing to provide the additional funds to maintain the hospital facilities which they have long taken for granted, or whether they will passively accept the alternative—a breakdown in the hospital service which has made Philadelphia one of the outstanding medical centers of the world."

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Medicine and Partisan Politics

Some weeks ago in private conversation a prominent public official heatedly declared that there was much more politics in organized medicine than in the Government. Taken aback, your Observer inquired what had brought him to this conclusion. He hedged somewhat but finally came out with it. He said that organized medicine had strongly opposed Government funds being allocated to healers not acceptable to the medical profession. This was politics, he said. Your Observer pointed out that these healers are not permitted to practice in approved hospitals, and that while they are making an effort to raise their educational standards, these are still considerably below those of medicine. Nevertheless, he persisted, the organized medical profession's opposition was political. It finally developed that the official had received treatment at the hands of one of the healers and resented what he considered unfair criticism.

When it comes to politics, public officials are, of course, in a class by themselves. An example is the method adopted by the Administration to obtain the enactment of controversial health legislation. Congressman Forest A. Harness of Indiana, Chairman of the House Subcommittee on Publicity and Propaganda in the Executive Departments, and his associates recently uncovered evidences of the widespread political activities of "Federal job-holders." Writing in the December issue of the *Reader's Digest*, Mr. Harness says that his Subcommittee found that "Government employees are back of the campaign to pressure Congress into passing a national compulsory health insurance law."

Pointing out that such legislation has "obvious appeal to the devotees of the all-powerful, all-supervising State," he observes that the source of agitation and drive for the scheme is in the Federal Security Agency. The Agency, he says, supplies the ammunition for the propaganda for this legislation. It sends representatives abroad at the expense of the Government to obtain data on how such schemes work elsewhere, and carries on campaigns in various states. Recently, it sent proponents of its ideas to Japan for the purpose of developing a health program. It is also credited with lending support to the Physicians' Forum and the Committee for the Nation's Health, both organizations favorable to the Agency's objectives.

Finally, the Subcommittee charges that in 1945, influential backers of the Wagner-Murray-Dingell bill met to plan a campaign at the so-called grass roots level. They worked out a device known as the "Health Workshop," through which it was hoped to indoctrinate leaders of farm and labor organizations, women's clubs. church groups, and others. The campaign was carried on in Minnesota and North Dakota, a conference being held in the latter state. According to Mr. Harness, only doctors on the Federal payroll were invited, and they were not doctors of medicine but Ph.D.'s.

Mr. Harness had much more to say about Government employees who are active politically, particularly where medicine is concerned. There is ample evidence, in his opinion, that they are using every means at their disposal to obtain the enactment of the Wagner-Murray-Dingell bill, and equally controversial legislation.

That health legislation is very much of a political matter is shown by the following incident. Several months ago, Senator H. Alexander Smith, Republican of New Jersey, sent a letter to governors of the various states inquiring as to their opinions with respect to certain features of the Wagner-Murray-Dingell bill and the proposed Taft National Health Act of 1947. When Senator Smith's communication came to the attention of Gael Sullivan, Executive Director of the Democratic National Committee, he charged the Senator with inaccuracies in an effort to obtain support for Senator Taft's bill. In a letter to Democratic governors, Mr. Sullivan said: "The letter does not give an accurate description of the two measures and appears to be an effort to obtain support for the bill sponsored by Senator Taft and the Republican Party.

> "Senator Smith has endeavored to give the impression that the Wagner-Murray-Dingell bill sponsored by the Democrats provides for extensive Federal control over medicine. Actually it provides for local operation of a health insurance plan assisted by Federal funds under which patients continue to choose their own doctors as they do now.
>
> "On the other hand the Taft bill would not care for the entire population, but only for paupers. Also it would give less Federal help to the poorer states which need such help the most.
>
> "The Wagner-Murry-Dingell bill proposes one minimum standard of medical care for *all* of the country.

BOSTON

"Senator Smith's letter is carefully written to give the impression that the Wagner-Murray-Dingell bill would encroach upon state rights.

"It would not. What it would do is provide enough funds for *all* states to do a decent minimum job in medical care for its citizens.

"The Taft measure would require needy states to match Federal funds. This would mean that the more a state needs Federal help to provide adequate medical care the less aid it would be able to receive.

"If you are planning to reply to Senator Smith's letter and desire any detailed additional information about the two health measures the Committee will be glad to supply you with the information."

Thus the political battle lines for 1948 are drawn.

Doctors are naïve where politics is concerned. Your Observer recalls that some years ago, there was much to-do about support for a friend of the medical profession who sought a high Government post. It should have been evident that this man for whom, incidentally, your Observer has respect and affection, would, if appointed, do the bidding of the President. However, representatives of organized medicine enthusiastically supported the appointment in the belief that he would oppose the Administration's health program. Of course, this official did what any loyal appointee should do—supported his chief.

So the plea here is that the medical profession be adult about its politics. Public officials play politics fast and furiously. Still one cannot say they are insincere in the belief that what they are seeking is good for the people. Medical men may well take a leaf from their book, and when engaging in politics do so intelligently and with all the skill at their command.

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"The Devilish Instrument..."

Of all modern inventions, none has been the source of more irritation than the telephone. No one denies its indispensability, but violent abuse is heaped upon it as a jangler of nerves and an extravagant waster of time.

Dr. J. J. Lightbody recently contributed an editorial to the *Detroit Medical News* entitled, "A Curse on Alexander Graham Bell." In the course of his comments, Dr. Lightbody says, "There are many times when he [the doctor] is inclined to grab a hammer and gently but firmly knock hell out of Bell's brainchild, but in the hurly burly of life and its associated demands for pocket lettuce, you eventually pick up the receiver, talk into the wrong end and wonder why the other party has hung up." Referring to the telephone as "the devilish instrument," he nevertheless grudgingly admits it is of first importance to the successful physician, who, if he is to be readily available, must have "efficient phone service with courteous, intelligent and patient operators."

Dr. Lightbody would have little difficulty obtaining support for his views. For example, several years ago, Dr. Howard Vincent O'Brien of the *Chicago Daily News* delivered himself of the following: "I presented myself at his [a friend's] office exactly at the time he had set. Seating myself in a luxurious leather armchair, I said: 'There is a question I wish to ask you.'

"At this point his telephone rang. Excusing himself, he answered it. Six minutes later (plus 18 seconds, to be exact) he hung up the receiver and turned again to me.

" 'You wished to ask a question. . . . '

" 'Yes,' I said, 'I did; and I shall now ask it. I wish to know. . . . '

"But before I could tell him what I wished to know the telephone had again gone into action.

"This was a brief call, lasting less than three minutes. For the third time I started to put my question; but for the third time the telephone took the ball from me and started down the field.

"Thus did the time pass and the morning ripen. Again and again I tried to state my business; only to have that leering black thing on the desk frustrate me.

"It was noon when I finally gave up. For at least the hundredth time my friend had asked me what I wanted to know. But I had forgotten.

"The telephone is said to be a promoter of efficiency. I am of the settled opinion that it destroys as much efficiency as it promotes. I think there ought to be a law passed against frivolous use of the telephone; or, if that isn't feasible, there ought at least to be some sort of gadget on the thing so that you could shut it off when you wanted to."

Returning to Dr. Lightbody, he relates that Detroit has a medical information service which was established in 1942 to "supply a public demand for help in obtaining professional services and related problems, but this service is only available between the hours of eight and six and the line is then switched over to an outside telephone answering service." He says that the telephone answering service has done a good job, but that it handles calls other than for physicians. He believes it is important that a twenty-four hour telephone answering service be established by the local medical society.

> "The public is confused and has a perfect right to be about the language that we speak and many of the things that we do under the title of professional ethics," Dr. Lightbody says. "Confusion exists about such terms as genitourinary, orthopedics, pediatrics, cardiovascular, thoracic, gastroenterology, internal medicine, etc. When someone needs a doctor in a hurry, it shouldn't be necessary to give him the names of three men and tell him to choose one—just because we are afraid of hurting someone's feelings. The operator who takes the request should get a physician immediately, then call the person back and tell him a physician is on the way—that is real service. Our primary function as an organized society of physicians is to render service to the community, and we can do this more completely and successfully by having our own telephone answering service."

It would appear that what Dr. Lightbody wants for Detroit is what Washington possesses, a twenty-four hour telephone exchange owned and operated by the local medical society. MEDICAL BUREAU renders the type of service to which Dr. Lightbody refers. Physicians are not only classified according to type of practice and the names of three physicians furnished when these is a request for such names, but where the inquirer has no physician of his own calls are given to practitioners who are willing to respond. It is your Observer's hope that the Wayne County Medical Society will deem it advisable to undertake a similar project. The Society would be well repaid in public good will and medical support.

Let's Get the Record Straight

Few editors are as enthusiastically articulate as Dr. Vincent D. Williams. Largely responsible for the *Jackson County Medical Society Weekly Bulletin* (Kansas City, Missouri), he is a tireless foe of bureaucrats. Like most editors who wield an energetic pen, he sometimes finds himself out on a limb.

In the November 29, 1947 issue of his publication, he writes an editorial entitled, "Maurice H. Friedman, Ph.D., M.D.—Debunker of Phony Statistics." After leveling a broadside at "certain characters employed by Uncle Sam" and accusing them of trying "to foist a stupid syllogism* on the solons in Washington and on the American people," he goes on to laud Dr. Friedman's success in discrediting their health statistics.

> "This fellow, Friedman, is a physician of superior professional attainments—a teacher, a researcher and a thinker," writes Dr. Williams. "It is interesting to hear his story of how he became a medical-economics iconoclast, *par excellence*: According to him, various communications supporting the previously-mentioned syllogism didn't seem just right; something about them didn't fit the over-all health picture, as he saw it. Accordingly, he analyzed critically all available information and quickly realized that the results which allegedly had supported the major and minor premise . . . were erroneous and at variance with facts.
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> "This evidence was accumulated and studied merely as a sideline. His primary job was that of a practising physician in Washington, D. C. We understand he offered this information to the local medical group but it was rejected for one reason or another. His appearance before the Senate Committee was simply in the role of an ordinary practising physician, unsponsored by his medical society or any other group. Eye witnesses record the devastating, explosive impact of his objective, impassionate and searching breakdown of the facts.
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> "We thank and congratulate a fellow-physician who of his own initiative and on his own time, while practising medicine, has made this signal contribution in the search for truth concerning American health problems. Without fanfare, without highly-paid *entrepreneurs*, this

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* "(1) Health conditions in America are deplorable, (2) Health care in America is grossly inadequate, and (3) Compulsory health insurance is necessary, urgent and the only solution."

ordinary, yet extraordinary, American citizen and physician has done more to blast away the specious syllogism of untruths than almost any other agency which has leveled an attack on the planners in Washington."

Where Dr. Williams received his information about the local medical society, we do not know. Whatever his source, it was unreliable, because the District Medical Society never rejected Dr. Friedman's material. There is no desire on your Observer's part to make too much of this matter, but a few facts will illustrate how inaccurate second-hand reports often are.

Upon his release from the Army a year or two ago, Dr. Friedman came to Washington to enter private practice. One of the first places he visited was the Society's office. In the course of a conversation with your Observer, Dr. Friedman said there were many inaccuracies in the statistics of proponents of a Government system of medical care. He was particularly concerned because of what he charged were erroneous conclusions drawn from an analysis of rejections for military service. On the basis of his investigations, he had written a voluminous document which he hoped would be used in condensed form by *Time* magazine. Dr. Friedman later informed your Observer that *Time* and other publications had rejected it. The manuscript was then turned over to your Observer, who held it for a time in the hope of publishing excerpts in the MEDICAL ANNALS. Dr. Friedman was not particularly enthusiastic about the appearance of his article in a medical journal, because he said that doctors needed no convincing.

Shortly thereafter, hearings began on the Wagner-Murray-Dingell bill. Dr. Friedman, in seeking additional information for his article, discussed it with a representative of the Senate Subcommittee on Health and Education. This individual urged Dr. Friedman to present his statistics to the Subcommittee. This he was reluctant to do. However, upon repeated urging, he finally decided that he would present the facts that he had gathered. In coming to this decision, he did not consult the District Medical Society. In fact, he says it did not occur to him to do so because most of the facts had been gathered with no intention of presenting them to a Congressional committee. At any rate, Dr. Friedman made his appearance and a very favorable impression.

There have been some interesting subsequent developments. The first is that the publication of Dr. Friedman's statement in official Government documents has been withheld at the request of a member of the Senate Subcommittee, so as to give the Federal Security Agency an opportunity to check Dr. Friedman's figures and submit its own. However, a portion of his statement was published in the MEDICAL ANNALS for September 1947.

Your Observer recently requested Dr. Friedman to read a book in which the views of the proponents of the Wagner-Murray-Dingell bill are set forth. It is such a biased document that he asked Dr. Friedman to consider writing a book jointly with him, dealing in an objective manner with the health issues of the day. Dr. Friedman had not arrived at any decision in this matter when this was written.

Something should be done at once to provide readers of books on controversial health matters with objective material. One finds very little literature dealing with the physicians' viewpoint on social legislation. However, there is ample material written by those taking the opposite view. Your Observer hopes that he and Dr. Friedman may make some small contribution in this field.

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"Taylor from Texas"

During his eighteen years' association with medical organizations, your Observer has made the acquaintance of hundreds of physicians. Few rate higher in his estimation than Dr. Holman Taylor, Secretary of the Texas State Medical Association and its perennial delegate to the AMA's House of Delegates, who died at Forth Worth, Texas on December 5.

Dr. Taylor was a potent influence in the House when your Observer first saw him in 1930. He recalls him as a picturesque figure possessed of unusual gifts for debate. Whenever he arose to address his colleagues he was always given close attention, for he was not only well informed, but an expert parliamentarian. He impressed his listeners with his honesty courage, and good humor. There was nothing mean about Dr. Taylor. He was basically a good man who wished to see justice done. He became such a well known figure at AMA meetings that the familiar self-introduction, "Taylor from Texas," was wholly unnecessary.

In the past few years, Dr. Taylor had aged noticeably, but his ardor and interest never flagged. Your Observer, although he was not an intimate of Dr. Taylor's, talked to him frequently about the problems of medicine. As Chairman of the Program Committee for the recent Conference of State Medical Secretaries and Editors, he communicated with Dr. Taylor as he did with all other secretaries, requesting suggestions for the meeting. He outlined briefly what the Committee had in mind and received a rather characteristic letter from Dr. Taylor, a part of which is here quoted.

> "I have taken the time to go over the program carefully, and I am constrained to say that it is a good program, and will be very useful to all of us—that is, a part of it will be useful to a part of us, if you know what I mean. I can't bring myself to agree entirely with the modern scheme of handling conferences such as this one, where those in attendance are divided into specialty groups. I am an old-time Methodist, and believe in camp meetings where everybody gets together and everybody gets religion, some of them all over again. I can't get accustomed to sneaking off in a corner for what religion there is in the corner, and then bringing it back to the group when they get together to hear the reports of the panels or whatever the things are called. It is going to be a bit disturbing to me this time, particularly in that I would like to hear the discussions of both the editors and the secretaries. I am going to have to divide my party and in doing that I am going to have to take part in the meeting in which I least want to participate. . . .
>
> "However, there is nothing to be gained in quarreling about it, and I have an idea that after all it won't matter and I will learn as much and teach as much under the new scheme as I would any other way."

Despite his misgivings, Dr. Taylor found the meeting highly interesting. No compliment paid the Program Committee was more highly prized by your Observer than that given by Dr. Taylor at the conclusion of the Conference when he said that it was one of the best secretaries and editors meetings in which he had participated.

Undoubtedly Dr. Taylor had his weaknesses. Your Observer has no knowledge of his efficiency as an executive, but as a man, he is certain that Dr. Taylor will always rank high among those who have served his profession well. To many of us, AMA meetings without "Taylor from Texas" will never be quite the same.

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Agency Heads Don't Count

Government officials and medical leaders may be poles apart on many matters pertaining to health, but in one respect they agree—there should be a Secretary for Health in the President's cabinet. However, differences of opinion exist as to the responsibility which should be placed upon this official. The American Medical Association's position is that his sole responsibility should be for the Nation's health. On the other hand, the Administration favors a cabinet post of health, education, and welfare. As might be expected, the Federal Security Agency is a staunch advocate of the latter.

Mr. Oscar R. Ewing, the new Federal Security Administrator, discussed this matter frankly at the Annual Conference of State and Territorial Health Officers, held in Washington early in December. Urging the passage of the bill which would create a cabinet post with triple responsibility, he observed, "I hate to have one hand tied behind when trying to make progress."

> "In the last War, the FSA trained a total of 9,000,000 workers, breaking the industrial bottleneck," Mr. Ewing pointed out. "If there were another war the health

surrounding camps and the evacuation of the civilian population, with its feeding and medical care problems, would come under its jurisdiction. And yet, since it is not of cabinet rank, someone who knows little of the problems involved will make the study in the fields which concern it."

For lack of rank General Omar N. Bradley, Veterans' Administrator, and Mr. Ewing were ruled off a Nation-wide broadcast on employing the handicapped, leaving Secretary of Labor Schwellenbach to speak on the subject. Reported Mr. Ewing: "We were told that in the Crossley rating, the President was highest, the Supreme Court next and then Cabinet members. Heads of agencies just don't count. So neither General Bradley nor I had any chance to tell our story, although FSA is doing 75 or 80 per cent of the actual work."

One can sympathize with Mr. Ewing's situation whether one agrees with the legislative proposal which he espouses or not. It is high time that there be a cabinet officer responsible for the health of the people of this country. Certainly there is nothing more important in peace or war than the physical and mental well-being of the populace.

T. W.

PHYSICIANS NEEDED BY NATIONAL GUARD*

S. Ross Taggart, M.D.

Lieutenant Colonel, Medical Corps, and State Staff Surgeon, District of Columbia National Guard

Mr. President, members and guests: The District of Columbia National Guard is, as you may know, in the process of reactivation. The War Department, in its allocation of units, has acted to meet the particular needs of the Nation's Capital. It has assigned air fighter units for long range interception, anti-aircraft artillery for close-in defense, and Military Police Battalions for continuance of internal order. A further assignment has been made of the necessary service units for maintenance and motility of the combat units. When fully organized, the D.C. National Guard will be manned by some 4,000 enlisted men and officers. The units allocated for the protection of Washington are to be organized at full wartime strength and equipped with the latest types of warning radar, fighter aircraft and anti-aircraft artillery, ready and able, as we members of the Guard like to say, to fight tomorrow's war tonight. It requires no rationalization to visualize an aggressive action against the United States as a series of lightning-quick air or guided missile thrusts against key governmental and industrial centers—undoubtedly an undeclared attack aimed at crippling essential functions—and no doubt Washington, with its concentration of Government and armed forces personnel, would have high priority for such attack.

The immediate need, and the reason for my appearing before you tonight, is for medical officers to staff the Medical Detachments of the three battalions of the anti-aircraft artillery group, the two battalions of the Military Police, and the fighter and service air groups. The Guard needs medical officers and at present only four are on active duty. That the medical profession of Washington must accept its responsibility of the Guard units during activation and full organization is evident.

Apart from the responsibility we are required to meet, the new National Guard presents unusual opportunities. Let's review these briefly:

The pay? Guardsmen receive a full day's pay for each weekly two-hour armory training period, and for each day of summer field training. In his spare time, a guardsman can earn one sixth the annual full-time pay of the regular army medical officer. Annual pay is based on 48 armory drills and 15 days' summer field training, one seventh of the weekly base pay for armory drill and full-pay and allowance for field training.

The rank? Normally the position vacancies as battalion surgeons are the grade of First Lieutenant or Captain, depending upon length of service.

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* Read before the Society, December 10, 1947.

However, the National Guard has authorized appointment in the next higher grade, Major, when that grade was held during previous service or is presently held under a reserve commission.

And further, many of the men of the Guard do not have a physician to whom they regularly turn in case of illness. The contacts of the doctor with an organized group of 4,000 men and their families influence many requests for medical service outside of duty hours for which, of course, regular medical fees are expected to be paid.

Regular pay, training under combat-tested leaders, valuable technical and tactical instruction, and a chance to enlarge your practice—these opportunities and the chance to serve your community and Nation in organizing its defenses are offered you by service in the National Guard. We must be organized, trained, and equipped for operation on M Day—Mobilization Day.

For information regarding appointment, contact Colonel Peyton Nevitt, Adjutant General, telephone Executive 2333, or Dr. S. Ross Taggart, State Staff Surgeon, National 6000, Extension 2165.

SPECIAL REPORT OF THE EXECUTIVE BOARD*

As most of our members know, business of the Society, unless it is of a more or less urgent nature, is held for the Annual Business Meeting in May. There are certain matters, however, which cannot be held in abeyance and require prompt Society action. In this category are applications for membership, certain changes in policies governing the Society, amendments to the Constitution and By-laws, the annual financial report and budget, and other proposals in which the time element is important. These matters are presented for the Society's action from time to time throughout the year, usually at business sessions before scientific programs.

Tonight you have before you two items which cannot be acted upon at this meeting. Our Constitution and By-laws require that they be brought to your attention at this business meeting and acted upon at the next, which will be in January.

Proposed Amendments to the Constitution and By-laws.—Your Board is pleased that more groups of physicians are seeking to establish sections of the Society. It is to be hoped that all types of practice will eventually be represented.

Chapter IX, Article I of the Society's Constitution and By-laws states, "Whenever a sufficient demand therefor arises, active, life and associate members may organize sections, composed of special classes of the membership or devoted to the consideration and promotion of special branches of medical science and art, by securing the adoption of amendments to this Constitution recognizing and establishing each section by name as a definite department of this Society."

Consideration was given by the Board at its meeting on August 25 to a petition received from a group of radiologists, all Active members of the Society, that a section be established in radiology. The Board voted unanimously in favor of such a section, and presents you tonight with an amendment providing for its establishment.

At its last meeting on November 24, the Board received a communication from a group of general practitioners who had organized, requesting approval of a Section on General Practice. The Board had previously approved the creation of such a section upon the request of the American Medical Association. It also provided the Association names of several general practitioners who might be interested. However, nothing was done until recently.

Your Board is much pleased that this matter has been taken in hand by practitioners who have been actively interested in Society affairs. It is very happy, too, to include in the proposed amendment a section providing for the establishment of a Section on General Practice.

The following amendment will be submitted to the Society for action early in January:

AMENDMENT XIV

Article II of Chapter IX of the Constitution and By-laws is hereby amended by adding thereto the following:

Section 8, on Radiology
Section 9, on General Practice

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* Presented before the Society at a business session, December 3, 1947.

Proposed Honorary Memberships for Major General Raymond W. Bliss, Surgeon General, U.S.A., Brigadier General Albert W. Kenner, M.C., U.S.A., and Major General Shelley U. Marietta (Retired), M.C., U.S.A.—From time to time your Board has proposed outstanding physicians for Honorary memberships. It has done so only after careful consideration of their qualifications and their professional standing. It is the Board's special pleasure tonight to present the names of physicians who have distinguished themselves in military medicine, and who incidentally have shown more than ordinary interest in our Society.

Major General Raymond W. Bliss. General Bliss is no newcomer to Washington. Prior to his being appointed Surgeon General of the U. S. Army, he had become a very important figure in the Army Medical Corps. During World War II he served as military observer in London (September, 1940), following which he became Surgeon of the First Army and Eastern Defense Command. He became Chief of Operations in July 1943, Assistant Surgeon General in August 1944, and Deputy Surgeon General on January 1, 1946. He was made Assistant to the Surgeon General a month later, with permanent grade of Brigadier General.

General Bliss has been honored by many universities and countries and is everywhere highly regarded for his professional abilities.

It has been the practice of our Society in recent years to award Honorary membership to the Surgeons General of the Army, Navy and Public Health Service. It could not be more appropriate than in this instance.

Brigadier General Albert W. Kenner. General Kenner is so well known to a great number of our members that it is hardly necessary to elaborate on his unusual abilities and outstanding military record. As is well known, he is a Washingtonian, having graduated from George Washington University School of Medicine. He counts among his admirers many of the Society's leaders. During the recent War, he was Chief of Medicine under General Dwight D. Eisenhower in the African Invasion, and later was Chief Medical Officer for SHAEF. He returned to Washington after the War to become a member of the Army Personnel Board.

It is especially fitting, in the opinion of your Board, that General Kenner be elected to Honorary membership.

Major General Shelley U. Marietta. During World War II, the Society had a real friend in General Marietta. On several occasions he responded to requests for assistance, usually by providing speakers for scientific programs. Without him it would at times have been very difficult.

General Marietta, who is now retired, can well look back with considerable satisfaction on a long and distinguished career. It should be unnecessary to review in detail his qualifications or his military record, for he is well known to Washington physicians. After twenty-one years of service with the Army, during which he progressed through various grades to Brigadier General, he came to Walter Reed Hospital in 1931, where he carried on until 1935. He returned in 1939 as commanding officer, following a tour at the Tripler General Hospital in Honolulu. Largely because of his administrative ability, Walter Reed Hospital has become one of the great military and medical institutions in this country.

General Marietta has been honored by many institutions and countries, and is a member of numerous professional organizations.

Generals Bliss, Kenner and Marietta, with the approval of the Board of Censors, will be presented for election to Honorary membership at a business meeting of the Society in January.

Respectfully submitted,
Fred. R. Sanderson, M.D., *Chairman*
William M. Ballinger, M.D.
William Earl Clark, M.D.
Coursen B. Conklin, M.D.
William P. Herbst, Jr., M.D.
Raymond T. Holden, Jr., M.D.
John Minor, M.D.
Theodore, Wiprud, *Secretary*

MEMBERSHIP

The following applicants for membership will be voted on at the meeting of the Executive Board, February 23, 1948:

For Active Membership

Kenneth Edwin Blundon, George Washington University—1943
Thomas McPherson Brown, Johns Hopkins University—1933
Rene Cailliet, University of Southern California—1943
Francis Patrick W. Hannan, Georgetown University—1935
Alvin Irving Kay, Georgetown University—1940
Saul Zukerman, George Washington University—1940

For Associate Membership

Eugene P. Cronkite, Stanford University—1941
Jay McLean, Johns Hopkins University—1919

Recent changes in membership status:

Active to Associate

John R. Cavanagh
C. Raymond Headlee
James R. Hurley
K. Charles Latven
John A. Mitchell
Arthur I. Sims

Washington Physicians of Yesterday

THOMAS ALLEN GROOVER, M.D., Sc.D.

Among physicians whose national eminence has brought luster and honor to the medical profession of the city of Washington, a high place must be accorded to Dr. Thomas Allen Groover, pioneer and nationally known roentgenologist of this city.

Born May 9, 1877, in Pidcock, Georgia, Dr. Groover came to Washington in 1893, and received from the Columbian (later George Washington) University the degree of M.D. in 1898, and later the degree of Sc.D. in 1926. He interned in Garfield Hospital for a year, and then served for a year in Nicaragua as physician to the Isthmian Canal Commission. Beginning the practice of medicine in Washington in 1900, he engaged in X-ray work for the remainder of his life, specializing exclusively in that field from 1912.

In 1900 he began X-ray work, then in a primitive and formative stage, in Emergency Hospital. He continued work in this field, shared in and contributed to the great development of radiologic science and technic, and attained the highest local and national eminence as a practitioner and authority in this branch of medicine. He had a discriminating scientific mind, and was a keen observer and student, which enabled him to make valuable contributions to the minutiae of radiology. He was a competent general clinician as well as radiologic expert, so that his diagnostic judgements were particularly reliable and authoritative.

(*Continued on page 70*)

DISTRICT CANCER CONTROL

JAY McLEAN, M.D.
Director, Bureau of Cancer Control, District Health Department

The effort to reduce cancer mortality is vast. It involves cancer detection, diagnosis, treatment, mass public education, refresher and training courses for physicians, the "vertical" (coördinated) instruction of medical students; and research for the cause (rather than cure) of cancer. One municipal agency with limited funds can do only a part of the job.

Fifty per cent of all cancer is virtually curable with surgery and/or radiation, if the patient receives the proper treatment early! Subtended from that "if" hangs all we can do today to control cancer. Fortunately, the group of curable cancers contains the "accessible" cancer: breast, uterus, cervix, mouth, rectum, and skin. We strive to raise the present cancer curability of 20 per cent to the possible 50 per cent pending the time research finds the cause of all cancer.

To accomplish this, persons over 40 years of age should have a cancer detection examination every six months. (Wangensteen[1] suggests three or four examinations a year.) The District contains 250,000 older people, so 500,000 examinations should be done yearly. Of the 1,324 practicing physicians, there are at most 1,000 available. This would average about 500 examinations yearly for each physician or about 2 a day. If these were done only by general practitioners (500 in number)[2] the load for each would be about 3 or 4 cancer detection examinations a day.

Five hundred general practitioners would not be expected to cope with a District-wide epidemic. All colleagues, specialists or not, would share the responsibility. Cancer is epidemic, although not contagious, for it is a disease common to, and affects many in a community at the same time. Seventeen million living Americans will die of cancer.

It avails little to incite 250,000 older persons by an "all-out" educational program to descend on 1,000 physicians for cancer detection examinations until the profession is willing and ready to accept them. A carefully planned and well executed "block by block" program would have to be done progressively "week by week" throughout the year; and to judge its effect on cancer morbidity and mortality, such a program would have to be carried on relentlessly through the years. No agency has sufficient funds to establish the necessary organization for this in the District, although its execution in a small state, such as Delaware (4 counties), was considered.

However, as human nature, professional and lay, is apt to be inert, a period of time will elapse during which adjustment may be obtained. Meanwhile the cancer detection clinic fills a gap in facilities for cancer detection examinations until all practicing physicians do their share of these examinations—all physicians, because the young doctors are qualifying in specialties and the number of general practitioners is decreasing.[2] Cancer detection is in the field of many specialists, such as surgeons, gynecologists, dermatologists, radiologists, and other specialists.

Yet we cannot hope to raise the cure rate to 50 per cent by means of the establishment of and dependence upon cancer detection clinics alone. A clinic manned by one physician working full-time, all year, could do possibly 2,500 examinations. With 500,000 examinations required, this would mean the establishment of 200 clinics with the services of 200 physicians! In the whole United States there are not 500 cancer clinics, and most of these operate not more than one or two days a week! Even if 20 local hospitals undertook the task, the load for each would be 25,000 examinations a year, and this would require 10 physicians and a staff of nurses and clerks in each hospital working full time. Thus it is seen that no practicable number of detection clinics can possibly accomplish the task. However, a great many practicing physicians can do it. When they do, cancer detection clinics will be liquidated, except for service to the indigent. The main function of the cancer detection clinic is educational. It emphasizes by its mere existence the need for early detection and prompt referral for competent treatment.

It would be helpful if the medical bureaus would set up a cancer detection examination classification after polling their societies to determine those who are willing to render this service now. Letters received in this Bureau from District residents indicate a need for this.

All the people have not been induced to secure a yearly physical examination,* but if the laity is sufficiently well informed about cancer and the profession prepared to receive these people for detection examinations, prompt diagnosis, and proper treatment, the fruits of the cancer educational program will be enormous. We do not fear dying of heart disease, but we do fear dying, hour by hour, for years, with cancer. The fear of a cancerous death may be the stimulus, long sought, to induce mass bi-annual examinations and enable the profession to progress in preventive medicine.

An educational program coördinated between the number of people needing this service and the number of physicians and facilities prepared to render it, will yield other benefits to the laity and the profession. For example, in cancer detection clinics, which have been in operation for years, it has been found in 20,000 examinations that 1 case of some kind of cancer is found in about every 100 presumably well people examined. If the cancer detection examination is expanded to a complete physical examination, the physician will discover heart disease, kidney disease, arthritis, myomata, diabetes, cervicitis (which often precedes cancer), hypertrophied prostate, polyps, hemorrhoids, gallstones, gastritis, sinusitis, strictures, fistulae-in-ano, herniae, deviated septum, varicose veins, anemia, constipation, gastrointestinal ulcer, hypertension, lues, menopausal symptoms and even pregnancy.[3] In the cancer detection clinic examination of 1,709 cases of presumably well people in Maryland, 36 per cent of the men and 51 per cent of the women were referred to physicians because medical or surgical conditions other than cancer were discovered.[4]

In the field of refresher courses for physicians and information for medical students, the Bureau will offer each District physician and senior medical student a manual which is devoted to the subject of the detection and diagnosis of early cancer and suspicious lesions.† This is an authoritative manual, made possible by the coöperation of many physicians and cancer specialists, as well as by contributions from many unpaid sources. The result is a manual for practicing physicians on cancer detection and diagnosis such as does not exist elsewhere in medical literature and which has been recommended by the National Cancer Institute. This Bureau will expend $1,800 for this purpose and the medical societies have offered to distribute these bulletins.

This Bureau is planning to establish at least 2 cancer detection clinics, employing 2 full-time physicians for this purpose, as well as nurses and clerks. Any physician may observe methods, procedures, and technics used in cancer detection examinations or volunteer to work in these clinics.

The Ayre and Papanicolaou cytologic diagnostic methods, from an economical standpoint on a mass population basis, may prove to be infeasible. Nevertheless, like the cancer clinic, these diagnostic methods have an educational value through the publicity given them, which makes people seek the complete cancer detection examination by their physician. This Bureau, through the pathologist at Gallinger Hospital, is prepared to diagnose material obtained by these two methods,‡ and several pathologists in the District are prepared to make diagnoses in this precarious field of tumor pathology. Adequate treatment for indigent cases is available at Gallinger Hospital by its well-trained staff.

In regard to consultative cancer service, the District is fortunate in having a greater number of cancer specialists with long experience and nationally recognized qualifications than most cities of the United States. Other qualified physicians may be added when developments pending in some of the medical schools and hospitals are completed. It is universally recognized that death in many cancer cases is due either to delayed or improper treatment after the patient has reported a condition which may be cancer. With oncologists and other highly trained specialists in the District, there is little excuse for not securing adequate consultation if any doubt exists in the mind of the physician who first sees the patient, as to whether the condition is cancer, and for its proper management.*

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* "It is undeniably true that the practicing physicians individually have been anything but vigorous in establishing a satisfactory program of periodic health examinations for their patients. However, this situation is improving rapidly from year to year and needs only a little more attention from a great many physicians to become adequate." From editorial by Hussey, H. H.: M. Ann. District of Columbia, 1947, **16**, 508.

† The Illinois Cancer Bulletins, published on the 10th and 25th of each month by the Committee on Cancer of the Illinois State Medical Society, 30 North Michigan Avenue, Chicago 2, Ill. Volume 1, May–October 1946 (12 issues) and volume 2, 1947 (11 issues).

‡ The equipment for obtaining specimens for these tests is now obtainable from the Kloman Instrument Company, Washington, D. C.

Proper management usually means proper referral. Consultation does not necessarily include referral, and may determine what is the best treatment for a given kind of cancer and who are qualified to carry it out. A cancer in the control of cancer throughout the United States is the referral of cancer cases for considerations other than those dictated by the ethics of our fraternity. Even highly trained specialists in dealing with cancer feel the need for consultation on both diagnosis and management, as is proven in the existence and discussions of tumor boards and conferences associated with the work of the tumor diagnostic clinics. In other words, "Do unto others as you would have them do unto you" or your dearest relatives. Unless this is done, we will always remain far short of closing the gap between 20 and 50 per cent of cancer cures, and the whole cancer control effort will be sabotaged.

We can no longer afford to ignore the insistent demand by the public for adequate detection examinations and above all for prompt diagnosis and early, competent treatment.† Some surgeons today practice a simple mastectomy instead of radical mastectomy when the biopsy frozen section reveals cancer. However, no cancer specialist would do anything less than a most painstaking radical operation for breast cancer, whether or not axillary nodes are palpable preoperatively.

A group, including members of medical societies' cancer committees, is endeavoring to standardize the scope of the cancer detection examination and to prepare standard forms for this purpose.

In about one-half of the states cancer is a reportable disease. This method of cancer fact-finding is more accurate and less expensive than either the voluntary cancer registration or the cancer survey method. The District of Columbia Health Department in coöperation with the United States Public Health Service has completed a cancer survey which indicates a higher incidence and prevalence of cancer in the District than the average for the Nation. This analysis should be published early in 1948.

SUMMARY

Except for organized lay education and pure laboratory research, the control of cancer is the job and duty of the private physician, whether he be a medical school dean, a specialist, or a general practitioner. The national cancer mortality rate can be reduced only by the work of a great many practitioners. It cannot be done by any practicable number of cancer detection clinics.

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3. Health Maintenance—Cancer Prevention Services; Report on Two Years of Operation. Philadelphia: Donner Foundation, 1946.
4. Jones, H. W., Jr., and Cameron, W. R.: Case-finding factors in cancer detection centers. J. A. M. A., 1947, **135**, 967.

MEETINGS

Friday, February 6

This will be a joint meeting with the Baltimore City Medical Society at Baltimore. The program will be furnished by the District Medical Society.

Wednesday, February 11

The program will be sponsored by the *Section on Gastroenterology*. Speakers and subjects to be announced.

Wednesday, February 18

The D. C. Rheumatism Society will present the program. Philip S. Hench, M.D. F.A.C.P , Chief of the Division of Rheumatic Diseases, Mayo Clinic, will speak on "Gout."

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* The Code of Ethics of the American Medical Association states that "if in serious illness the diagnosis is in doubt, competent consultation shall be sought without delay." Cancer, or the possibility of its presence, is a most serious condition.

† "It has become increasingly recognized that practicing physicians generally are insufficiently aware of the importance of watching for and recognizing precancerous lesions and early signs and symptoms of cancer, and that even in its advanced stages cancer may be unsuspected, and consequently the patient may not receive adequate treatment. Studies of delay in obtaining treatment all too often point to the fact that physicians are as culpable in this matter as are the patients. Informed persons, wishing to protect themselves against the development of cancer or to take advantage of early recognition and treatment, at present the most important elements in the control of the disease with existing therapeutic methods, may sometimes not find their physicians as alert to this fact as they are themselves."—National Advisory Cancer Council: Cancer in medical school curriculum. J. Nat. Cancer Inst., 1947, **8**, 1.

News and Personals

The American College of Chest Physicians, Pennsylvania Chapter, and the Laennec Society of Philadelphia are sponsoring a postgraduate course in diseases of the chest, to be held during the week of March 15–20, 1948, at the Warwick Hotel, Philadelphia. Enrollment will be limited to 30 physicians. Tuition fee is $50 for members, and $90 for nonmembers. Further information may be secured from the office of the American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Ill.

The Second Annual Michigan Postgraduate Clinical Institute will be held at the Book-Cadillac Hotel, Detroit, March 10–12, 1948. The course will be devoted to newest developments in medicine, surgery, obstetrics, pediatrics, dermatology, ophthotolaryngology and general practice. All members of the American Medical Association and of the Canadian Medical Association are cordially invited to attend. There is no registration fee.

The Association for the Study of Internal Secretions announces a Postgraduate Assembly in Endocrinology to be held in Los Angeles, February 23–28, 1948. The faculty is composed of outstanding students of endocrinology in the United States and Canada. Applications may be sent to the Chairman of the Committee on Postgraduate Instruction, Dr. E. Kost Shelton, 921 Westwood Blvd., Los Angeles 24, Calif.

An Institute on Alcoholism, which will present "Progress in the Treatment of Alcoholism," will be held in the auditorium of the District Medical Society, January 23, at 8:15 p.m. Presiding will be Dr. Oscar B. Hunter, Vice Chairman of the Washington Committee for Education on Alcoholism, which is sponsoring the Institute. The principal speaker will be Mrs. Marty Mann, Executive Director of the National Committee for Education on Alcoholism. There will be no admission charge. All physicians are not only cordially invited but urged to attend.

CALENDAR OF MEETINGS

December 1	Committee on Radio Education
	D. C. Society for Crippled Children
December 2	Woman's Auxiliary Committee
	D. C. Dietetic Association
December 3	Scientific Meeting of Society
December 4	Section on Neurology and Psychiatry
	Association of Undergraduate and Practical Nurses
December 6	Washington School of Psychiatry
December 9	District Dental Society
	X-ray Technicians of Washington
December 10	Woman's Auxiliary to the Medical Society of the District of Columbia
	Scientific Meeting of Society
December 11	Committee on Cancer Control
December 12	Board of Censors
December 13	Washington Psychoanalytic Society
December 15	Subcommittee on Orientation
December 16	Board of Censors
	D. C. Medical Technicians
December 17	Board of Censors
December 18	Committee on Postgraduate Education
December 19	Grievance Committee
	Section on General Practice
December 22	Committee on Public Health
December 29	Executive Board
	Subcommittee on Tuberculosis

The Eighth Annual Essay Contest of the Mississippi Valley Medical Society will be held in 1948. The Society will offer a cash prize of $100, a gold medal, and a certificate of award for the best unpublished essay on any subject of general medical interest (including medical economics and education) and practical value to the general practitioner of medicine. Contestants must be members of the American Medical Association who are residents of the United States. The winner will be invited to present his contribution before the Annual Meeting of the Mississippi Valley Medical Society, to be held in the early fall. All contributions shall be typewritten in English in manuscript form, submitted in five copies, not to exceed 5,000 words, and must be received not later than May 1. Further details may be secured from Dr. Harold Swanberg, Secretary, Mississippi Valley Medical Society, 209–224 W. C. U. Building, Quincy, Ill.

The Silver Spring Academy of Medicine has invited Dr. Charles A. W. Uhle, Associate in Urology of the University of Pennsylvania Graduate School, to speak, February 2, on "Congenital Kidney; Its Medical and Surgical Implications." Discussants will be Drs. Lloyd Lewis, W. Dabney Jarman and Hilbert Sabin.

The regular monthly meeting of the **Society of Registered X-ray Technicians of Washington** will be held, February 10, at 8 p. m., in the Medical Society's library. Anyone engaged in X-ray work is welcome to attend.

At the 41st Annual Meeting of the **Southern Medical Association,** November 24–26, 1948, **Dr. Oscar B. Hunter** became the new President-elect, to take office in November, 1948. During the past year Dr. Hunter has served as First Vice President. Dr. A. LeDoux of New Orleans was installed as President for the ensuing year.

Dr. Helen Gladys Kain was named Vice Chairman of the Women Physicians of the S. M. A.

About 3,000 physicians attended the meeting in Baltimore, including a sizable delegation from Washington. Participating in the sectional programs listed below were many members of the District Medical Society:

Neurology and Psychiatry: "Psychosurgery for Pain," Drs. Walter Freeman and James W. Watts.

Pathology: "Brain Repair," Dr. Samuel P. Hicks; "Differential Diagnosis of Jaundice by Laboratory Methods," Dr. Oscar B. Hunter, Jr.

Proctology: "The Surgical Treatment of Ulcerative Colitis," Dr. Garnet W. Ault.

Anesthesiology: "The Anesthetic Management of Patients during Vagotomy, Dorsal Sympathectomies and Operations upon the Esophagus," Dr. Lloyd H. Mousel.

General Practice: "Penicillin in Pectin and Oil: A Preparation for the Prolongation of Blood Levels of Penicillin," presented by staff members of the Food and Drug Administration, Federal Security Agency, including Dr. Harold L. Hirsh, Acting Medical Director.

Medical Education and Hospital Training: "The Role of the Hospital in Undergraduate Medical Teaching," Dr. Harold J. Jeghers.

Present to discuss scientific papers were Drs. Harry F. Anderson, Roger M. Choisser, Robert Dow, Aubrey O. Hampton, Oscar B. Hunter, Jr., John L. Parks, Thomas M. Peery, and William J. Tobin.

The District Medical Society was also well represented in the Scientific Exhibit: "Exsanguination Transfusion for Erythroblastosis," Dr. Hunter, Jr. and Dr. John B. Ross; "Treatment of Lung Abscess," Dr. Roy G. Klepser; "Protein Therapy in Surgery," Dr. Jacob J. Weinstein; "Hyperhidrosis: Surgical Treatment," Dr. J. Ross Veal and Dr. John Shadid.

The Southern Chapter of the American College of Chest Physicians met conjointly with the S. M. A. Dr. Brian B. Blades presented a paper on "Streptomycin Protection in the Surgical Treatment of Tuberculosis," and Dr. Charles P. Cake served as moderator at the X-ray Conference.

The newly formed **American Academy of General Practice,** with headquarters temporarily located at 20 North Wacker Drive, Chicago, boasts a current membership enrollment from 42 states, the District of Columbia, and Hawaii. Dr. Paul A. Davis, of Akron, Ohio, who was Chairman last year of the Section on General Practice of the AMA, is President of the Academy. Other officers are Dr. E. C. Texter, Detroit, Vice President; Dr. Stanley R. Truman, Oakland, Calif., Secretary; and Dr. U. R. Bryner, Salt Lake City, Treasurer. Mr. Mac F. Cahal, Executive Secretary of the American College of Radiology, is serving as general counsel and Acting Executive Secretary of the Academy.

Grants totalling a million and a half dollars were awarded in December to 64 colleges, research laboratories, and public health institutions throughout the country by the **National Advisory Cancer Council of the National Cancer Institute.**

Included in the 46 grants for clinical as well as basic biological research were the following amounts for local institutions, and the names of the individuals who will direct the research:

George Washington University: $17,388 to Dr. Pearl B. Holly, Associate in Medicine, for a study of "Hemoglobin metabolism in blood dyscrasias and related malignancies under therapy with radioactive materials and other forms of recognized treatment"; $2,160 to Dr. Chester E. Leese, Associate Professor of Physiology, for research on "Effect of urethrane and urethrane derivatives of the hemogram of normal rats"; $3,240 to Dr. Lawrence J. Thomas, Associate in Medicine, for study of "Relationship between liver glycogen reserve and liver function to hepatic and gastrointestinal neoplasm."

Georgetown University School of Medicine: $10,000 to Dr. Charles F. Geschickter, Professor of Pathology, for "Preparations and chemical study of organic-metallic compounds."

Carnegie Institute of Washington: $7,060 to Dr. Louis B. Flexner for "Correlation of cytological, biochemical and physiological differentiation during growth of the embryonic cell."

In addition $25,000 was allocated to George Washington University for the teaching of cancer, and $25,000 to Howard University, also for teaching of cancer and tumor clinic seminars.

President Holden appointed **Drs. Oscar B. Hunter, Roger M. Choisser and Harold J. Jeghers** to represent the Medical Society on the Organizing Committee for the Fourth Annual Congresses on Tropical Medicine and Malaria, to be held in Washington, May 10–18, 1948. The **Executive Board** approved the appointments at its meeting, November 24.

An **Advisory Committee to the D. C. Society for Crippled Children** was created by the Executive Board at the same meeting, at the request of that organization. With the approval of the Board President Holden appointed the following members to serve on such a committee: Dr. Edward C. Wilson, Jr., Chairman; Drs. William T. Spence, Robert L. Simpson, Everett J. Gordon, Charles W. Thompson, Paul Chodoff, and George Maksim.

Pending the Medical Society's approval of a **Section on General Practice,** which will be voted on this month, the following members have been elected to serve as officers:

Dr. R. Lee Spire, *Chairman;* Dr. J. Chester Brady, *Vice Chairman;* Dr. Herbert S. Gates, *Secretary-Treasurer.*

The Section has also elected an Executive Committee to consist of Dr. A. Magruder MacDonald, Chairman; Drs. William C. Lambert, Sidney Cousins, Stewart Clapp and A. Fife Heath.

Dr. Roy Lyman Sexton entertained the members of the **Section on Gastroenterology,** December 8, at his home. Following a buffet supper the Section held a round table discussion of case reports, in which Drs. W. E. Clark, J. R. Verbrycke, F. A. Reuter, F. A. J. Geier, R. S. McGrath and T. M. Foley participated.

The Section on Neurology and Psychiatry met December 4 in the Society's library. Dr. William T. Spence read a paper on "Chronic Epidural Hematoma"; Drs. Addison Duval and Otto Will discussed "Electro Shock Therapy in Schizophrenia."

Due to greatly increased printing costs **new subscription rates** for the Medical Annals went into effect, January 1. Hereafter yearly subscriptions will be accepted at $3.50 per year in the United States; $3.75 for Canada; and $4.00, foreign. Single issues will sell for 35 cents each.

Dr. Walter R. Stokes, Chairman of the Medical Society's Committee on Public Relations, reports that the series of lectures on health education currently being presented at the **Jewish Community Center** is meeting with good attendance and a lively audience appreciation. Dr. Stokes says the program is probably the most comprehensive one of its sort ever undertaken in Washington. In the September Annals was printed a list of the subjects for discussion and the speakers. Included among the speakers were Drs. Leslie H. French, Joseph H. Cowan, F. J. Eichenlaub, Daniel L. Borden, Carlton N. Price, William F. Burdick, Samuel Dodek, Harold F. McCann and Herbert H. Diamond. Dr. Julius S. Neviaser appeared in place of Dr. Leonard Peterson, December 9. An additional meeting has been scheduled for March 23, when Dr. Ivy A. Pelzman will speak on "Diseases Peculiar to Men."

President Truman unveiled the **Franklin D. Roosevelt Memorial Plaque at Georgetown Hospital,** December 1. This plaque, which will commemorate a $55,000 contribution by the CIO to the new children's wing of the Hospital, bears the inscription: "This department is established as a tribute to a man who strove for the dignity of the common man and his children and who overcame tremendous physical handicaps to give his beloved country leadership in democracy's greatest crisis."

Philip Murray, President of the CIO, made the formal presentation. It was accepted by the Very Reverend Lawrence C. Gorman, S. J., President of Georgetown.

Georgetown Hospital opened a new **arthritis clinic,** December 4, which will receive patients each Thursday. Like the other clinics, it will be under the direction of Dr. Harold Jeghers, Chief of Medicine, and Dr. Frank Horvath, head of the outpatient department. Operating the new clinic will be Drs. Darrell Crain, J. Lawn Thompson and Milton C. Cobey.

The Washington Metropolitan Health Council has voted to withdraw from the Council of Social Agencies and to reorganize as a separate agency. This decision was reached at a meeting of the delegates and coördinating board, December 4. Financial support may be sought from the Federation of Community Chests.

The Clinical Club of Washington has reorganized for the resumption of meetings which were suspended during the War. Dr. George W. Creswell is the new President and Dr. Harry S. Bernton, Secretary-Treasurer. They will meet the first Tuesday of each month at the Army-Navy Club.

The Clinico-Pathological Society held its regular meeting, December 16, at the home of Dr. Worth B. Daniels. Two case reports were presented: "Cirrhosis of the Liver," Dr. B. L. Hardin, and "Unilateral Multicystic Kidney Disease in Children" by Dr. C. P. Howze.

Arlington Hospital sponsored three lectures during December for its residents and staff members. On December 4, Dr. Robert H. Detwiler spoke on "Erythroblastosis"; on December 10, Dr. J. Edward Payne read a paper on "The Use of Heparin and Dicoumarol in Acute Coronary Thrombosis"; Dr. Charles P. Cake discussed "Tuberculosis," December 17.

Dr. Paul C. Kiernan was invited to address the annual meeting of the Wisconsin State Medical Society, which was held in Milwaukee, October 6 and 7. His subject was "Acute Obstructive Cholecystitis " He was also chairman of a round table discussion on cancer of the colon and rectum.

Dr. Ross T. McIntire spoke on "The Blood Program of the American Red Cross" at the monthly meeting of the D. C. Society of Medical Technologists, which was held in the Society's building, December 16.

Dr. Lloyd H. Mousel was elected First Vice President of the American Society of Anesthesiologists, at its annual meeting in New York City, December 4–6.

Dr. Walter A. Bloedorn was reëlected Secretary of the Gorgas Memorial Institute of Tropical and Preventative Medicine at its annual meeting at the Pan American Union, November 24. **Colonel J. F. Siler,** retired Commandant of the Army Medical School, will continue as President.

Dr. Helen Gladys Kain, Regional Director for the Mid-Atlantic Area of the American Medical Women's Association, attended the mid-year Board meeting in Cincinnati, Ohio, at the Netherland Plaza, December 6 and 7.

Dr. Jack L. Derzavis is the most recent name to appear on the programs of Professional Staff Proceedings at Walter Reed General Hospital.

Dr. Paul A. Cornely has been appointed the new Medical Director for **Freedmen's Hospital.** The position had been filled temporarily by Dr. Charles A. Drew, head of the Hospital's surgery department. Dr. Cornely was head of the Department of Bacteriology and Public Health at Howard University before he accepted his new appointment. During the War he served on the National Medical Advisory Board of the Selective Service System. He is a member of the Survey Committee of the Washington Metropolitan Health Council, and consultant to the National Foundation for Infantile Paralysis and National Urban League.

LARGE TURNOUT FOR CHRISTMAS PARTY

About 400 physicians and their wives attended the first Christmas Dinner-Dance sponsored by the Woman's Auxiliary to the Medical Society of the District of Columbia, held on December 17 at the Mayflower Hotel.

It was without doubt one of the most colorful social events in the Medical Society's history. A friendliness characterized this affair which added much to its enjoyment. Seldom has there been as much fraternization among a large group.

Much of the credit for the success of the dinner-dance must go to Mrs. Robert E. Moran, President of the Woman's Auxiliary, and to Mrs. William P. Herbst, Chairman of the Social Committee. Assisting them with the details were the following: Mrs. Fred R. Sanderson, Mrs. John Shugrue, Mrs. Edward J. Cummings, Mrs. Harry Zehner, Mrs. G. Roland Gable and Mrs. Marcel J. Foret, members of the committee, and Mrs. John E. Morris, Corresponding Secretary.

Music for the occasion was provided by Sidney's Mayflower Orchestra. Dr. Robert Harmon led several songs in which those present took part. The surprise of the evening was an exceptionally accomplished male quartet.

All in all, the occasion was one which will linger pleasantly in the memory. There has been considerable enthusiasm for a repeat performance. The suggestion was made that there be another dinner-dance for the membership later on in the year. No decision with respect to this proposal has been arrived at by the officers of the Woman's Auxiliary.

The primary reason for the Auxiliary's sponsoring the dinner-dance was to offer young physicians and their wives an opportunity of getting acquainted. The success which attended this phase of the event was most satisfying. About 80 per cent of those present were new members of the Medical Society or of the Woman's Auxiliary.

BOOK REVIEWS

Pharmacology, Therapeutics and Prescription Writing for Students and Practitioners, 5th ed. WALTER ARTHUR BASTEDO, PH.G., PH.M. (Hon.), M.D., Sc.D. (Hon.), F.A.C.P., Consulting Physician, St. Luke's Hospital, New York, St. Vincent's Hospital, Staten Island, and the Staten Island Hospital; President, U. S Pharmacopoeial Convention 1930–1940; member of Revision Committee, U. S. Pharmacopoeia; formerly Curator of the New York Botanical Garden; Attending Physician, City Hospital, New York; Instructor in Pharmacology, Cornell University; Associate in Pharmacology and Therapeutics and Assistant Clinical Professor of Medicine, Columbia University. Price, $8.50. Pp. 840, with 82 illustrations. Philadelphia: Saunders, 1947.

The fifth edition of this very popular and long-awaited textbook will be gratefully received by the thousands of physicians who "need guidance in the employment of drugs for the treatment of sick patients."

For the last ten years, rapidly advancing medical science has probably produced more new drugs and remedies and therapeutic technics than in centuries before, and in order to keep pace with this speedy progress, Dr. Bastedo has completely rewritten this fifth edition of his book, originally published in 1933.

The section on fundamentals and terminology is a classic. The following chapters cover the entire field of materia medica and therapeutic technic, and are by on means a mere listing of important drugs and proceedings. In a very enjoyable way a true pharmacologic, physiologic, and even experimental background is given for the clinical evaluation of drugs and remedial measures. All chapters are good, but those on hormones, antihistamines, and drugs acting on the central nervous system are very good, and those on insulin and the treatment of shock and arsenic poisoning are excellent.

It is amazing to find complete, up-to-date reliable information on all the newest drugs from sulfones, penicillin, streptomycin to thiouracil, nitrogen mustard and radioactive phosphorus.

The last section on prescription writing is also a classical presentation, although for practical purposes we would like to see an emphasis on the newest trend in the technic of prescription writing, namely, the acceptance of the metric system in combination with plain English, instead of the rather archaic Latin language, mastered by a few only. This, however, does not intend in any way to put a blur on the shining qualities of this outstanding text. The material is very well organized, well balanced and complete, and is presented in such a clever way that it makes very pleasant reading.

It is a book which can be recommended without hesitation as the masterpiece of a refined clinician and of an excellent teacher.

FRANK S. HORVATH, M.D.

Rypins' Medical Licensure Examinations, 6th ed., under the editorial direction of WALTER L. BIERRING, M.D., F.A.C.P., M.R.C.P., EDIN. (Hon.), former member of National Board of Medical Examiners, American Board of Internal Medicine, and Iowa State Board of Medical Examiners; Professor Emeritus, Theory and Practice of Medicine, College of Medicine, State University of Iowa; Secretary, Federation of State Medical Boards of the United States, with the collaboration of a review panel. Price, $6.00. Pp. 690. Philadelphia: Lippincott, 1947.

This is a practical book, originally written by the late Dr. Harold Rypins for helping the graduates of medical schools in state board examinations. Every effort has been made to treat as concisely as possible those portions of the medical curriculum generally selected for use by the various examining boards. The fifth, and now the sixth edition of this popular book, was revised and reëdited by a board of distinguished medical educators and clinicians, headed by Dr. Walter L. Bierring, a leading authority on state board examinations and Secretary, Federation of State Medical Boards of the United States.

And this is the best assurance that the somewhat limited and specially arranged material is presented on a high authentic level. The basic medical sciences include pharmacology, and, to the clinical sciences, psychiatry was added in this edition.

The technic of this book is quite clever inasmuch as the carefully reviewed material of each subject is followed by representative questions which will stimulate the student to restudy certain problems.

It is a useful book, not only for the examinee and examiner, but for anyone who desires to refresh and bring up to date his knowledge of subjects which are somewhat out of the line of his primary interest, but are important and interesting just the same. The book is moderately priced and is well printed.

FRANK S. HORVATH, M.D.

A Textbook of Clinical Neurology with an Introduction to the History of Neurology, 6th ed. ISRAEL S. WECHSLER, M.D., Clinical Professor of Neurology, Columbia University, New York; Neurologist, The Mount Sinai Hospital; Consulting Neurologist, Montefiore Hospital and Rockland State Hospital, New York. Price, $8.50. Pp. 829, with 162 illustrations. Philadelphia: Saunders, 1947.

Since its previous edition four years ago, this popular standard text of clinical neurology has been revised with only a few major changes. Because the author's work is so widely known, remarks will be confined to the major revisions. The format and general plan remain relatively unchanged except for a few newer and better illustrations. David Wechsler has renamed his section "Psychological Diagnoses" and has rewritten and enlarged it more broadly from the viewpoint of general brain function and specific dysfunctions in brain disease. He points out to the neurologist the usefulness of psychometry: (a) in determining degrees of mental retardation, (b) in differential diagnosis, (c) in determining a patient's actual and potential mental abilities, and (d) in compensation cases.

The battery of psychologic tests discussed has been expanded and mention is made of mental mechanisms in prefrontal lobotomy. Descriptions of several syndromes have been added, including porphyria polyneuropathy, toxoplasmic encephalomyelitis, congenital muscular torticollis, hemangioma of the vertebra and sleep paralysis. The syndrome of lateral sclerosis is now considered a primary condition if over a sufficiently long period of observation no new changes occur in the patient's state to indicate that another condition has been present, though slowly evolving.

The section on subarachnoid hemorrhage is inadequate. Here little attention is given to the grave prognosis of spontaneous hemorrhage without ligation if survival occurs from the first attack.

Syndromes resulting from various arterial aneurysms and rupture are not discussed. Therapy in general has been brought up to date. Prostigmine and vitamin E are advised for amyotrophic lateral sclerosis, though in general they have little or no effect in the disease. Tridione in petit mal is mentioned. Neostigmine and curare are not mentioned in treatment of spastic states, although the use of the latter in acute poliomyelitis is suggested. Penicillin in the treatment of acute infections of the nervous system is given scant attention and dispensed with in a single sentence: "Penicillin is more effective than sulfa drugs." Dosage, its intrathecal use and dangers, is omitted. In the therapy of neurosyphilis penicillin is given but slightly more attention. This is somewhat surprising in view of the important role this antibiotic is playing in the treatment of these conditions. Perhaps the author considers that detail unnecessary because of the common and widespread application of the drug.

Equally startling is the complete omission of streptomycin therapy in tuberculous meningitis. Folic acid is not mentioned in the therapy of pernicious anemia even though it is known that this drug has little or no effect on the neurologic picture. Dosage and importance of liver extract is given scant attention.

References have been rearranged and in some instances brought up to date. Although the omissions noted above do not seriously subtract from the usefulness of the text for the seasoned practioner who has many sources of information, they may be important to the student and intern confronted with the therapy of these conditions.

The value of the book still lies in its lucid and accurate description of neurologic diseases. The author has lived up to his original promise "to make the book a fairly complete repository of as much factual knowledge of clinical neurology as can reasonably be gathered between two covers."

R. A. WETZLER, M. D.

WILLIAM ROBERT PERKINS, M.D.
(1876–1947)

Dr. William Robert Perkins, a practicing physician in Washington for the past 42 years and a Life member of the District Medical Society, died December 9 at Doctors Hospital after a brief illness. He had practiced for many years at 1463 Rhode Island Avenue, N.W.; he resided at 5510 16th Street, N.W.

Dr. Perkins was born in Chestertown, Md., the son of John Wesley and Sarah Elizabeth Perkins, and was educated in the schools of Maryland and the District of Columbia, and by private tutors. He received his degree in pharmacy from the National College of Pharmacy (now George Washington University School of Pharmacy) in 1897 and his degree in medicine from George Washington University in 1901. He was resident physician at Emergency Hospital in 1903; house surgeon at New York Lying-in Hospital, New York, in 1904; and resident physician at Willard Parker Hospital, New York, 1905.

In 1905 he returned to Washington to enter private practice. From 1916 to 1920 he was associate visiting obstetrician at Columbia Hospital for Women.

He was elected to membership in the old Medical Association of the District of Columbia in 1906 and in the District Medical Society in 1907, and became a Life member, January 1, 1947. He was a Fellow of the American Medical Association, and a member of the Southern Medical Association and the George Washington University Medical Society.

Surviving are a son, Dr. William Robert Perkins, Jr., who has been associated in practice with his father and who is also a member of the Medical Society; two daughters, Mrs. Russell E. Ames, Hartford, Conn., and Mrs. Richard L. Reish, Arlington, Va.; and a sister, Mrs. Marie Madert, of Washington. His wife, the former Ethel Maye Fawcett of Washington, died in 1933.

ERICH WILHELM SCHWARTZE, A.B., M.D.
(1891–1947)

Dr. Erich W. Schwartze, an Active member of the Medical Society of the District of Columbia, died November 11, 1947, at Providence Hospital following a brief illness. He had been a general practitioner in Washington since 1931, with his office and home located at 1225 Talbert Street, S.E.

Born in Cairo, Illinois, January 14, 1891, Dr. Schwartze was educated in the public schools of that city. He received his A.B. degree from the University of Illinois in 1912 and his degree in medicine in 1914 from Rush Medical College.

From 1914 to 1916 he taught physiology and pharmacology at the New York University and Bellevue Hospital Medical College. While employed as pharmacologist with the U. S. Department of Agriculture (1916–1925), he came to Washington and affiliated with the District Medical Society as an Associate member. In 1925 he was appointed Senior Fellow at the Mellon Institute of the University of Pittsburgh, which appointment he held until 1929, when he joined the faculty of the University of Georgia as Professor of Physiology and Pharmacology. Two years later he returned to Washington to enter private practice.

As a fellow in medicine of the National Research Council he was sent to England in 1923 to study physiology at the London University College.

Dr. Schwartze resigned his Associate membership in the Medical Society when he moved to Georgia. In 1944 he was elected to Active membership. He was a member of the American Medical Association and the American Society for Pharmacology and Experimental Therapeutics, Inc. He was also a member of the Calvary Baptist Church and the Lebanon Masonic Lodge.

Surviving are his wife, Mrs. Annie Andrews Schwartze, who organized the M. Eleanor Brackenridge Club for nursing scholarships; two sons, Lt. George M. Schwartze, U.S.N., stationed at Newport, R. I., and Erich W. Schwartze, Jr., a student at Bowman Gray Medical School, Winston-Salem,

N. C.; a daughter, Mrs. Helen Saunders, Culpepper, Va.; and a brother, Rudolph A. Schwartze, of Charleston, West Virginia.

JOSEPH HOLMES BRANSON, M.D.
(1866–1947)

Dr. Joseph H. Branson, an Active member of the Medical Society of the District of Columbia since 1934, died November 30, 1947, at his home, 3531 16th Street, N.W., after two weeks' illness. He had practiced medicine in Washington since 1894.

Dr. Branson was born in Clearbrook, Va., July 28, 1866, the son of Nathaniel B. and Nancy Holmes Branson. He was educated in public and private schools in Virginia. After attending Swarthmore College for two years, he enrolled for a medical course at the Southern Homeopathic Medical College, Baltimore, graduating in 1894. For two years (1894–96) he was resident physician at National Homeopathic Hospital.

He was a member of the attending staff of Homeopathic Hospital from 1904 until he retired, shortly after his 80th birthday. From 1906 until 1930 he was in charge of obstetrics, and from 1906 until his retirement he was also in charge of anesthesia. He served as instructor in obstetrics in the Nurses' Training School at the Hospital for about 20 years of its existence. For many years Dr. Branson was anesthetist for the Florence Crittenton Home.

In addition to his membership in the District Medical Society, Dr. Branson was a Fellow of the American Medical Association. He was also a member of the American Institute of Homeopathy and the Washington Homeopathical Medical Society, and treasurer of the latter since about 1915.

He is survived by his wife, Mrs. Ellen Robinson Branson; a daughter, Mrs. Dorothy Branson White, Cleveland; and a son, Joseph Holmes Branson, Jr., who resides at 4416 Klingle Street, N.W.

Penicillin-Hirsh

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Penicillin Dermatitis—Derzavis and Beinstein

(Continued from page 33)

previous sensitization to the penicillin produced by their own dermatophytosis. Indeed, the research seems to support such contention. However, contrary to the work of Lewis and Cormia, Peck believes that the antigen giving rise to the trichophytin is not identical with penicillin nor is there cross-sensitivity between the two. Peck believes that the dermatophytes are capable of producing multiple antigens. The dermatophytes in this case may have been the source of the patient's initial contact with penicillin.

SUMMARY

A case is reported of a severe immediate reaction to penicillin followed by a delayed reaction.

The modus operandi of the apparent spontaneous sensitization is discussed.

The incidence of penicillin reactions has increased significantly. It should now be realized by all physicians that penicillin is not a reactionless drug, and one should carefully weigh the indications when it is used in the treatment of an individual with a skin disease. Let it be recalled that such dermatoses responded to other less allergenic medications before the advent of penicillin.

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Washington Physicians of Yesterday—Groover

(*Continued from page 58*)

In 1916–19 he formed a partnership with Drs. Arthur C. Christie and the late Edwin A. Merritt; this firm enjoyed high prominence and popularity in Washington, and its members conducted the X-ray services in Emergency, Garfield, Georgetown, and Children's Hospitals. Dr. Groover's national prominence in his specialty was evidenced by his membership and official connection with the various national organizations devoted to radiology, as follows: member of the American Roentgen Ray Society (President 1925); Fellow and Past President and Chancellor of the American College of Radiology; member of the Radiological Society of North America; diplomate of the American Board of Radiology.

Dr. Groover was also a member of and active in numerous other organizations. He joined the Medical Association of the District of Columbia in 1899; and the District Medical Society in 1902, in which he rendered active committee service and served as President in 1925. He was a Fellow of the American Medical Association and of the American College of Physicians; and a member and Vice President (1924) of the Southern Medical Association. He was interested in local civic affairs, manifested by membership in the Washington Lions Club (of which he was a past president), the Washington Board of Trade, and the National Press Club. He was the author of a number of literary contributions and addresses.

Dr. Groover died April 20, 1940, from malignant disease resulting late from undue exposure to X-rays in the early days before their injurious effects became known. X-rays were discovered by Roentgen in 1895, and radium by the Curies in 1898. The harmful effects resulting from exposure to these rays were of such insidious and protracted development that they did not become recognized for a considerable period of time. Patients and operators who in those early days were unguardedly exposed to radiation, before the dangers and the necessity for precautionary measures were realized, suffered irreparable damage in the destruction and devitalization of their tissues. With the care now exercised, the hideous injuries then inflicted are happily not now seen. The excessive X-ray exposure to which Dr. Groover was thus unsuspectingly subjected in those early days of ignorance initiated progressive physical injuries which pursued a harrowing course through the remainder of his life. For forty years he was condemned helplessly to watch the inexorable advance of his bodily damage and injuries. One by one he lost the fingers of his left hand, later the entire hand, and ultimately suffered the final fatal cancerous developments. Courageously and patiently he endured the pain and increasing physical disablement, and unflinchingly he continued to pursue the practice of his chosen specialty, damaging though it had been.

Dr. Groover was a victim and martyr, even though unwitting and involuntary, to the hazards incident to the practice of medicine. His harrowing and sacrificial experience, and the fortitude with which it was borne, merit recognition and esteem, and poignantly exemplify the calculated risks to which physicians expose themselves in the course of their service to humanity.

JOHN B. NICHOLS, M.D.

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REVIEW OF BILIARY TRACT SURGERY FOR A SIX-YEAR PERIOD AT DOCTORS HOSPITAL

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Periodic review and evaluation of work performed is important and should be regularly done. Such studies are helpful in keeping us acquainted with trends or changes in methods and with the results that may be expected with increasing surgical experience.

With the exception of operations for malignancy of the pancreas or ampulla of Vater, biliary tract surgery has undergone no radical changes in recent years. The lowered morbidity and mortality of biliary surgery have been largely due to (1) better understanding of pathologic physiology; (2) increased knowledge of the liver role in metabolism with particular reference to the need for adequate protein and carbohydrate in maintaining that role; (3) the use of antibiotics and chemotherapeutic agents; (4) the efficiency of vitamin K in preventing and controlling hemorrhage in jaundiced patients; (5) improvements in diagnostic procedures; (6) more liberal use of blood transfusions before and after operation. All these have combined to render surgery of the biliary tract more efficient and safer.

This is a review of cases in which surgery was performed for lesions of the biliary tract in the Doctors Hospital from March 1940 to March 1946.

This survey covers 319 cases (table 1). These operations were performed by 34 different surgeons, with 6 surgeons performing the great

TABLE 1

Sex, Age and Mortality Figures

Total Cases	319
No. of Males	56
No. of Females	263
Average Age of Males (youngest, 28; oldest, 76)	51.6 years
Average Age of Females (youngest, 20; oldest, 87)	49.6 years
No. of deaths due to surgery	4 (1.25% mortality)
No. of deaths not due to surgery	8 (2.5% mortality)

majority of them. There were 12 deaths (table 2) giving a hospital mortality rate of 3.7 per cent, which is rather high. However, 8 of these were from causes which made death inevitable or from causes unrelated to the biliary tract surgery. The actual mortality rate for biliary tract surgery was, therefore, 1.25 per cent.

TABLE 2

Causes of Death in Hospital

CAUSE	TOTAL	AUTOPSY
Common duct obstruction with resulting changes, hepatitis, etc.	3	2
Pneumonia	1	1
Cirrhosis of the liver	3	2
Acute pancreatitis	1	0
Carcinoma of head of pancreas	1	1
Coronary Occlusion	1	0
Perforated diverticulitis (87 years old)	1	1
Cardiovascular-renal disease	1	1
	12	8 or 66.6%

There were 56 males with an average age of 51.6 years, the youngest being 28 years and the oldest 76 years, and the average hospital stay of 17.4 days. There were 263 females with an average age of 49.6 years, the youngest being 20 years and the oldest 87 years, and with an average hospital stay of 19 days. The ratio of females to males is, therefore, about 5 (4.7) to 1, which is higher than usually reported (2 to 1). The fact that gallbladder disease occurs more frequently in women than in men raises the question of the relationship of pregnancy to the development of cholecystic disease. It has long been thought that pregnancy was a major factor in the causation of gallbladder disease. According to Clagett et al,[1] Robertson and Dochat[2] studied the evidence carefully and were unable to confirm this impression. They found that women who have had children are no more likely to have gallstones than those who have not had children. The factors which cause cholecystic disease and gallstones appear to function more effectively and at an earlier age in women than in men.

Of the 319 cases only 68 had jaundice preoperatively. Fifteen were males and 53 females (table 3). Although about 5 (4.7) times as many women as men were operated upon, jaundice was present in only 3.5 times as many women as men. In other words, men are not as apt to have gallbladder disease as women are, but are more likely to have jaundice as a complication of cholecystic disease. The explanation for this is not apparent. The average age of the jaundiced males (54.8 years) was about the same as that of the jaundiced females (55.1 years) but higher than that for all males (51.6 years) and all females (49.6 years) operated upon. The average hospital stay of the jaundiced males was 3 days longer than that of the females. Of the 7 hospital deaths in jaundiced patients, only 1 was due to cancer and 6 were due to causes other than malignancy.

TABLE 3

Age, Sex, Hospital Stay, and Hospital Mortality Rate of Jaundiced Patients

Total Cases	68
No. of Males	15
No. of Females	53
Average Age of Males (youngest, 38; oldest, 76)	54.8 years
Average Age of Females (youngest, 20; oldest, 87)	55.1 years
Average Hospital Stay	21.4 days
No. of Deaths*	7
Mortality Rate %	10.29
Total due to Surgery	5.8

* 1 case of carcinoma of pancreas.

TABLE 4

Mortality Rate (Jaundiced and Non-jaundiced Patients)

	NO. OF CASES	NO. OF DEATHS	MORTALITY RATE
Jaundiced	68	7	10.29% (actual 5.8%)
Non-jaundiced	251	5	1.95%

Of the 7 deaths (mortality rate of 10.29 per cent) in those patients with jaundice, 3 were due to causes rendering death inevitable (table 4). The actual biliary tract surgery mortality rate in the jaundiced group was, therefore, 5.8 per cent. As would be expected, the risk of operation was greater when jaundice was present as shown by a mortality rate of 5.8 per cent in the jaundiced patients compared to a mortality rate of 1.9 per cent in the non-jaundiced ones. It is undoubtedly true that the mortality rate in operations in non-malignant jaundiced patients has been lowered in recent years by the use of vitamin K, more liberal use of blood transfusions, a better understanding of body fluid balance, and the importance of glucose and proteins in liver metabolism.

I believe it is worth mentioning and very gratifying that postmortem examinations were performed in 8 of the 12 cases (66.6 per cent) in which death followed surgical procedure on the biliary tract. This has provided accurate information regarding the state of the biliary tract postoperatively and the actual cause of death in these cases. The information gained in this way undoubtedly helps in reducing the risk of this operation in the future.

A right rectus incision was used in 301 cases, a transverse incision in 11, a median incision in 1, a left rectus incision in 1, a low midline incision extended upward in 1, and an unstated type of incision in 4. It is probable that in the future transverse incision will be much more frequently employed.

In cases of cholecystectomy, the question of drainage always arises. Some operators say they never drain, others say they always drain, and some say they drain sometimes. In this series of 319 cases, drainage by cigarette or penrose drain, brought out usually through a stab wound, was employed 260 times. It is unquestionably true that most patients will get along satisfactorily without drainage. However, one feels safer with a drain in, if some complication such as leakage from the cystic duct should occur, and certainly drainage prolongs the convalescence little or none.

Avertin and gas was the most frequently used anesthetic, having been used in 121 cases. Gas-ether-oxygen was next most frequently used (111 cases). Spinal anesthesia was used in 62 cases and intravenous sodium pentothal and gas in 21 cases. In 3 cases intravenous sodium pentothal alone was used, and in 1 intravenous sodium pentothal and local was employed. Avertin as the basal anesthetic was used very frequently during the first 4 years of the period covered by this survey but has been used much less frequently during the last 2 years, whereas the use of intravenous sodium pentothal as the basal anesthetic has been increasing recently. Spinal anesthesia is excellent in biliary tract surgery because of the excellent relaxation which it produces, but it is not so safe in older people, many of whom have arteriosclerosis and hypertension. Many people who require biliary tract surgery are in this older age group.

There is frequently discussion about common duct exploration, whether it should be done routinely or only when definitely indicated as in the presence of jaundice, a history of jaundice, or of dilatation or thickening of the common bile duct, or the presence of stones. In this series the common duct was explored in only 38 cases. It is significant that stones were found in only 13 cases. In 27 of these drainage was instituted. In none of the cases in which the common duct was not explored did subsequent events indicate that exploration should have been done. Common duct exploration increases slightly the operative risk and in many cases prolongs somewhat the convalescence. On the basis of these figures, therefore, it would seem that common duct exploration should not be done routinely but only when definitely indicated.

As would be expected, chronic cholecystitis was the pathologic condition found in most of the cases (277), 245 with stones and 32 without stones (table 5). There were 23 cases of acute cholecystitis. It is interesting to note that in 4 of these, or 17.3 per cent, no stones were present. Cholecystectomy rather than cholecystostomy has become the operation of choice in cases of acute cholecystitis. The mortality rates justify the use of the procedure. There were 8 cases of empyema of the gallbladder. Malignancy was encountered very infrequently; there were only 6 cases, 4 of the pancreas, 1 of the gallbladder, and 1 of the liver. Only 1 of the patients died in the hospital. Carcinoma of the gallbladder or liver is not amenable to surgical treatment. I know of no proven case of carcinoma of the gallbladder or liver in which operation has resulted in cure. However, some cases of carcinoma of the head of the pancreas, lower end of the common duct, and ampulla of Vater are amenable to surgical procedure, and each year more operations for these lesions are being performed. Pancreatitis was found in only 2 cases, 1 acute and 1 chronic. Cirrhosis of the liver was found in 3 cases.

TABLE 5

Type of Biliary Tract Disease

DISEASES	NUMBER OF CASES
Chronic cholecystitis	
a) with stones	245
b) without stones	32
Acute cholecystitis	
a) with stones	19
b) without stones	4
Empyema of gallbladder	8
Malignancy	
a) pancreas	4
b) gallbladder	1
c) liver	1
Pancreatitis	
a) chronic	1
b) acute	1
Cirrhosis of liver	3
Total	319

It is gratifying that cholecystectomy was carried out in 289 cases with only 8 deaths, a mortality rate of only 2.7 per cent (table 6). When the common duct was explored at the time of cholecystectomy, the risk of operation was slightly increased, but since stones were found in the common duct in a high percentage of these cases, use of the procedure was justified. The number of times that cholecystostomy was performed, 21, with a mortality rate of 14.2 per cent, represents a decline in the frequency of use of this procedure. The high mortality rate for cholecystostomy was undoubtedly due to the fact that the procedure was used in those patients who were in poor condition. It is interesting to note that operations on the biliary tract were accompanied by other surgical procedures in one fifth of these cases. The addition of further major surgical procedures did not seriously increase the hospital mortality rate even though these associated operations included such procedures as appendectomy, repair of umbilical, ventral and inguinal hernias, gastroenterostomy, colostomy, resection of colon, hysterectomy, and resection of the hypogastric plexus.

TABLE 6

Mortality Rate for Types of Operations on Gallbladder and Bile Ducts

OPERATION	NUMBER OF CASES	HOSPITAL DEATHS		ASSOCIATED MAJOR OPERATIONS
		Number	Per cent	
Cholecystectomy	289	8	2.7	56
Cholecystostomy	21	3	14.2	8
Choledocholithotomy	2	0		0
Cholecystgastrostomy	6	1	16.6	0
Cholecystduodenostomy and Choledochostomy	1	0	0	0
Total	319	12		

Choledocholithotomy was performed in 2 cases in which cholecystectomy had been performed previously elsewhere. Cholecystgastrostomy was performed in 6 cases and cholecystoduodenostomy with choledochostomy in 1 case for carcinoma of the head of the pancreas involving the common duct.

Serious complications were relatively few (table 7). Pulmonary complications which might be classed as atelectasis and/or pneumonia occurred in 10 cases, with recovery in 6 and death in 4 However, of the 4 deaths, pneumonia was the primary cause of death in only 1. One postoperative hernia developed in the group of cases with pulmonary complications.

TABLE 7

Complications

TYPE	NUMBER	OUTCOME	
Atelectasis and/or pneumonia	10	Recovered*	6
		Died	4
Disruption of abdominal wound with eviseration	1	Recovered	1
Disruption of wound	1	Recovered*	1
Wound infection	5	Recovered	5
Postoperative seroma	1	Recovered	1
Postoperative bleeding from incision	1	Recovered	1
Biliary obstruction with jaundice and pancreatitis	1	Died	1
Liver failure and circulatory collapse	2	Died	2
Icterus	1	Recovered	1
Cardiovascular renal failure	2	Died	2
Congestive heart failure (thyrotoxic)	1	Recovered	1
Auricular fibrillation	1	Recovered	1
Coronary occlusion	1	Died	1
Shock, severe	1	Recovered	1
Parotitis	1	Recovered	1
Phlebitis	1	Recovered	1

* One developed postoperative hernia.

Wound complications consisted of 1 disruption with eviseration with recovery; another wound disruption with recovery; 5 wound infections, 1 seroma, and 1 postoperative bleeding from the wound, all with recovery. One postoperative hernia occurred in this group.

In the group with biliary tract complications, there was 1 case of bile obstruction with jaundice and pancreatitis and death; 2 cases of liver failure and circulatory collapse with death; and 1 case of icterus with recovery.

Considering the average age of the patients covered by this survey and the extreme age of many of them, the number of cardiac complications was surprisingly few. There were 2 cases of cardiovascular-renal failure with death; 1 case of congestive heart failure on the basis of a thyrotoxic heart with recovery; 1 case of auricular fibrillation with recovery; and 1 case of coronary artery occlusion with death.

A miscellaneous group of complications was made up of 1 case of moderately severe shock with recovery and 1 with femoral thrombophlebitis with recovery. No cases of common duct injury, severance or stricture, or of biliary fistula were encountered.

Follow-up letters were sent to all patients covered by this survey who were discharged from the hospital, 319 minus 12 who died in the hospital, or 307 (table 8). Three questions were asked: "1. Have symptoms which you had before operation been relieved? Yes or no. 2. If no, please describe the present symptoms. 3. Has there been jaundice or other complications since operation? Yes or no." Twenty-eight letters were returned because of incorrect address, and 198 questionnaires were answered. After all cases of malignancy were eliminated, the results have been classified as follows:

1. Good—all symptoms relieved and no complications since operation, 168 cases.
2. Fair—marked improvement, but still some more or less minor symptoms, 15 cases.
3. Poor—no relief of preoperative symptoms and considered operation a failure, 15 cases.

TABLE 8

Results of Follow-up Exclusive of Malignancies

TYPE	NUMBER
Good	168
Fair	15
Poor	15
Returned (incorrect address)	28
Died in hospital	12
Unknown	81
Total	319

A study of the poor result group is planned, and a report of this will be made at a later date. However, the impression was gotten that some of the cases in the poor result group had not had clear indication for operation.

SUMMARY

A study of 319 cases in which biliary tract surgery was done is reported.

In this study, the following were considered: age, sex, hospital stay, hospital mortality rate, jaundice, anesthesia, abdominal drainage, postoperative complications, common duct exploration, type of operation, and results.

The ratio of females to males was 5 to 1.

The mortality rate was 1.24 per cent. The mortality rate in jaundiced patients was 5.8 per cent and in nonjaundiced patients 1.95 per cent. Jaundice was present in 18 per cent of the cases preoperatively.

Jaundice occurred relatively more frequently in males than in females.

A right rectus incision was most frequently used, and abdominal drainage was usually instituted.

Avertin and gas was the most frequently used anesthetic, but avertin has gradually been largely replaced by sodium pentothal intravenously as a basal anesthetic.

The common duct was explored in 10.8 per cent of the cases, and stones were found in 34.4 per cent.

Chronic cholecystitis with or without stones was the lesion found in 86 per cent. Acute cholecystitis with or without stones was relatively infrequent, in only 7.08 per cent. Cholecystectomy is now usually the operation of choice in acute cholecystitis. Malignancy was found infrequently in only 1.9 per cent. The incidence of serious complications was low. Pulmonary complications were the most frequent.

Of the cases heard from, in 86 per cent the result was good. In 7 per cent the result was fair, and in 7 per cent the result was poor. However, in 1 of the last group there was cirrhosis of the liver and 1 carcinoma of the pancreas; thus, the poor group really should be only 6.6 per cent.

A properly indicated and properly executed cholecystectomy, as is well known, is a very dramatic and successful surgical procedure.

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CURRENT PROBLEMS IN BILIARY TRACT DISEASE*

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PHYSICIANS and surgeons are as subject to fads as milady is to changes in fashions. It is, therefore, worth while from time to time to pause and to evaluate current trends in diagnosis and treatment. Periodically performed, this enables the physician to separate procedures of proven worth from those of lesser value. There are many problems in biliary tract disease which could be evaluated on this basis, and it would not be possible to cover all of them at one time. I have, therefore, chosen several topics which I feel are important and which should be of interest.

DIAGNOSIS

The diagnosis of biliary tract disease divides itself rather sharply into those cases without jaundice and those with jaundice. When jaundice is absent the history and physical examination are frequently sufficient to establish the diagnosis or at least to make the diagnosis presumptive. The history of epigastric or right upper quadrant pain occurring during or shortly after pregnancy is highly suggestive. Intolerance to certain foods is frequently complained of by patients suffering from biliary tract disease, but it is not peculiar to them alone. The pain of gallbladder colic is very often severe and is typically located in the right upper quadrant of the abdomen. The attacks frequently occur at night and are accompanied by nausea and frequently by vomiting. Vomiting does not always relieve the distress of gallbladder colic, and the intensity of pain may not subside for several hours and may be unaffected by even large doses of opiates. Pain is frequently referred to the right shoulder region, although occasionally both shoulders may be involved.

The temperature is usually moderately elevated, and the leukocytosis may be surprisingly slight even in patients who are very acutely ill. I have found the sedimentation rate to be of greater help than the leukocyte count in following the course of attacks of acute cholecystitis. Pain, nausea and fever persist for 24 to 72 hours, and it is typical of gallbladder disease that even after the acute symptoms have subsided residual soreness remains for several days when the gallbladder region is palpated. At this time it is safe to make X-ray examinations, and no single method is more helpful than the Graham-Cole test. Such examinations should be made in any case in which there are symptoms, however mild, referable to the upper abdomen. If these prove negative, X-ray examinations of the stomach and bowel should also be performed.

Jaundice is not a symptom of gallbladder disease. Jaundice may be caused by complete or partial obstruction of the common duct or by obstruction of the smaller biliary channels by tumor or disease of the liver itself. From the diagnostic standpoint the latter cases tax the skill of the diagnostician to the utmost. The increase in the number of cases of infectious hepatitis and homologous serum jaundice since World War II has added to the difficulties. This is especially true of those cases which are accompanied by pain in the right upper quadrant. I have so far operated on only 1 patient who was jaundiced and in whose case common duct obstruction was suspected but at operation infectious hepatitis was found. This was a young woman whose symptoms began shortly after pregnancy and whose laboratory tests and clinical history and course all suggested very strongly the presence of common duct stones. A biopsy of the liver confirmed the diagnosis of hepatitis, and fortunately the patient made an uneventful recovery.

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* Read before the Society, October 29, 1947.

It has long been taught that the jaundice which accompanies neoplastic obstruction of the common duct is painless. However, a recent review of a series of cases has shown that 40 per cent of the patients have jaundice associated with pain. In most instances the gallbladder is distended and palpable, but here again there are variations depending upon the location of the obstruction. Two months ago I operated upon an elderly woman who was deeply jaundiced and whose stools were at times alcoholic and yet whose gallbladder was not palpable. It was hoped that her symptoms were caused by a stone obstructing the common duct, but at operation a carcinoma of the hepatic ducts was found at a point proximal to the entrance of the cystic duct, which accounted for failure of the gallbladder to enlarge. Tests which we find most helpful in the differentiation of the hepatocellular and obstructive types of jaundice are the presence or absence of urobilinogen in the feces and urine, cephalin cholesterol flocculation, thymol turbidity, plasma prothrombin, serum proteins, and albumin-globulin ratio. The bromosulfalein is a good test of liver function, but is of little value in cases of jaundice. When infectious hepatitis is suspected, tests for the presence of virus A and B are indicated. Biliary drainage may be a valuable aid in the diagnosis, especially if cholesterol crystals are found. These invariably indicate the presence of stone, but their absence does not necessarily signify that stone is not present.

Indications for Operation

The question of indications for surgical intervention is one which confronts the physician daily. In a patient who has symptoms referable to the gallbladder and whose X-ray examination shows a normally functioning gallbladder, medical treatment by means of diet and drugs is indicated. Duodenal drainage as a method of treatment of chronic cholecystitis has been abandoned in most clinics When the X-ray examination discloses a poorly functioning or non-functioning gallbladder, the case should be considered a surgical one. Even in cases in which stones are not demonstrable by X-ray examination, surgery should be performed and the gallbladder removed. Eighty-five per cent of the cases of poorly functioning or nonfunctioning gallbladder show stones at operation even when they are not demonstrable by roentgenogram. A portion of the remaining 15 per cent have symptoms on the basis of papillomas or other tumors of the gallbladder and this, too, is an indication for surgical removal. Recently I operated on a patient who had received the diagnosis of chronic cholecystitis on the basis of study by an eminent gastroenterologist 8 years previously. At that time she was told that her gallbladder was not functioning properly, but that she could get along on medical treatment. Her symptoms responded to treatment for awhile but gradually recurred and became more severe; she changed physicians and was advised to be operated upon. At operation multiple papillary tumors of the gallbladder and a papilloma of the common duct were found. The gallbladder and the involved portion of the common duct were removed, and the pathologic examination showed carcinoma of the gallbladder and the common duct. The patient died of cerebral metastasis 4 months after operation. The prognosis in a case of this sort is almost invariably poor. The surgeon sees the poor results of procrastination, and perhaps this makes his viewpoint more radical than that of the internist.

The question frequently arises as to whether operation should be performed in cases in which gallstones are discovered accidentally and on patients who have had a first attack of cholecystitis, subsequent examination showing the presence of stones. In view of the low mortality of cholecystectomy today and the many possible complications which may arise from procrastination and delay, namely, cirrhosis of the liver, carcinoma, perforation, and jaundice due to obstruction of the common duct, I feel that once the diagnosis of calculus cholecystitis is reasonably established, operation should be performed.

Operation on Elderly Patients

Frequently we are confronted with the statement by physicians that they are treating a patient who should be operated on because of continued and recurrent symptoms of gallbladder disease, but that they feel the patient is too old to justify the risk of operation. Recently I reviewed the results of operations for disease of the biliary tract for a 10-year period in patients over 65 years of age. The picture in elderly patients is frequently complicated by the presence of concomitant diseases, such as arteriosclerosis, hypertension, nephrosclerosis and diabetes mellitus. The association between cardiac disease and gallbladder disease has repeatedly been stressed, and striking improvement in the cardiac picture may be obtained by removal of the diseased gallbladder. Our records show that 51 patients over the age of 65 were operated on for diseases of the biliary system. The mortality, excluding cases of carcinoma in this group, was 8.1 per cent. Elderly patients should not be deprived of a chance for the relief of symptoms on the basis of old age alone or because of accompanying cardiovascular or metabolic disease. The life expectancy of the elderly patient today is such that he deserves a chance to pass his remaining years in the comfort which he will obtain from the removal of a chronic focus of infection and the enjoyment of a balanced and palatable diet.

Treatment of Acute Cholecystitis

In the past ten years there has been considerable controversy in the surgical literature over the treatment of acute cholecystitis. Much of this controversy has arisen over confusion in terms. If by operation for acute cholecystitis is meant operating upon patients within 24 hours after admission in an acute attack, then I am opposed to operations for acute cholecystitis. If, however, the term is applied to patients who are still acutely ill despite a period of 48 hours or more of preparation in the hospital, then I am an advocate of operation in the presence of acute cholecystitis. I have found that almost every case of acute cholecystitis will subside on a régime of nothing by mouth, the use of sedatives, and intravenous therapy. Operation can then be performed with the patient in better physical condition and the morbidity and mortality is lower. In the occasional case in which the temperature rises, abdominal rigidity and tenderness increase, and the leukocytosis and sedimentation rates rise despite the preoperative régime outlined, operation is performed without further delay.

Choice of Operation

Once it has been decided that operation should be performed, the type of operation becomes of paramount importance. In cases of chronic cholecystitis with stones, cholecystectomy is generally accepted as the procedure of choice. In the acute and subacute phases of cholecystitis no such uniformity of opinion prevails. In the presence of the edema which accompanies acute cholecystitis, cholecystectomy is frequently difficult, and many surgeons advise that a cholecystostomy with drainage of the gallbladder should be performed. This is undoubtedlv a safer operation than cholecystectomy in the hands of the average surgeon, but it leaves much to be desired because of the prolonged period of convalescence and the invariable need for a second operation for the removal of the gallbladder. A gallbladder once diseased usually remains so. Recently I was called upon to see an acutely ill woman of 75 who had had a cholecystostomy 25 years ago. For the previous year she had been suffering from indigestion. The recent acute attack was characterized by extreme prostration, nausea, vomiting and pain. At operation it was evident that perforation had occurred through the site of the old cholecystostomy, and a localized abscess was present. Cholecystectomy was performed, and recovery was uneventful. My dislike for the operation of cholecystostomy stems from such oft-repeated experience. It is for this reason that I prefer to give patients with acute gangrenous cholecystitis a chance for the inflammation to subside by a few days of hospital care with the supportive measures such as intravenous therapy and blood transfusions. If this plan is rigidly enforced in the hospital, it has been my experience that perforation of the gallbladder does not occur and cholecystectomy rather than cholecystostomy can be safely performed. I reserve cholecystostomy for the occasional patient, usually one of very advanced years who is so toxic that only a minimum of surgery can be tolerated; the operation is performed under local anesthesia or with intravenous pentothal sodium reinforced by oxygen-nitrous oxide and curare.

Technic of Operation

Many technics of cholecystectomy have been devised and it is foolhardy to say that a specific method is the best method. Some surgeons like to remove the gallbladder from above downward. This seems to me to be approaching the gallbladder from the wrong end inasmuch as the blood supply is controlled last rather than first, as it usually is in the removal of any organ. Other surgeons advocate partial excision of the gallbladder and electrodesiccation of the remaining mucous membrane to eliminate the gallbladder for all practical purposes as a functioning organ. This method, too, seems unnecessary for most cases requiring cholecystectomy.

The primary need in operations upon the biliary tract is adequate exposure of the gallbladder and the vessels comprising the cystic triangle. It is very easy to remove the gallbladder in a cadaver. Relaxation is complete and exposure is easily obtained. Furthermore, the field of operation is never obscured by bleeding. These conditions can and must be approximated in the operating room to enable the performance of good biliary tract surgery. A pararectus incision is made which extends from the costal border to or below the level of the umbilicus. Relaxation is obtained by the use of spinal anesthesia, which may be supplemented by the use of intravenous pentothal if the patient desires to go to sleep.

Exposure is facilitated by the preoperative use of the Levine tube to empty the stomach and by the proper placing of abdominal packs and retractors. The Levine tube remains in the stomach for 24 to 48 hours after operation, depending on the clinical course. The contents of the cystic triangle, which includes the hepatic, cystic and common ducts, as well as the hepatic and cystic arteries, must be exposed in every instance by incision of the gastrohepatic omentum which overlies them. When this technic is carried out the operation becomes a simple one, and the danger of damage to vital structures is minimal. After cholecystectomy, drainage is not employed unless indicated by bleeding from the gallbladder bed or unless infected bile has been spilled.

I am frequently asked for my criteria for opening the common duct. The common duct is explored in all cases with a history of jaundice either past or present and in cases in which the common duct is thickened and dilated. In some cases it is possible to feel stones in the common duct, but in my experience the exploratory scoop is the surest method of determining whether stones exist in the ducts. In recent years some clinics have emphasized the importance of more frequent exploration of the common duct at the time of cholecystectomy. Although I feel that it is important to open the duct when the indications are present as outlined above, I fear that much harm may be caused by the occasional operator who has been led to believe that the common duct should be explored more frequently. In the past 5 years I have seen 1 case of stricture of the common duct which followed

(Continued on page 132)

RECOGNITION AND MANAGEMENT OF ESOPHAGEAL DISEASES*

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Clinical interest in esophageal disease is relatively recent. This is due to the fact that in the past there was no adequate treatment for many of these conditions. Since the recent marked improvement in thoracic surgical technic, however, it has been possible to institute curative treatment for many lesions of the esophagus, and to carry out such therapy with a relatively low mortality rate. This has led to increased knowledge and interest in esophageal disease.

Anatomic Aspects

The esophagus is a tubular organ, the proximal portion of which is continuous with the distal portion of the pharynx. It arises posterior to the cricoid cartilage and anterior to the sixth cervical vertebra, and extends inferiorly in the posterior mediastinum through the diaphragmatic esophageal hiatus into the abdominal cavity. The inferior portion of the esophagus ends at the superior aspect of the stomach, which normally is situated between the tenth and the twelfth thoracic vertebrae. The mucous membrane of the esophagus is stratified squamous epithelium, and adjacent to this there is a tough, thick, submucosal layer. The muscular coats are composed of an inner circular layer and an outer longitudinal layer. The former predominates in the distal portion and the latter predominates in the proximal fourth portion of the organ. The type of muscle varies with various species. In man, the proximal third part of the esophagus is composed of striated muscle, the middle third part is formed of both striated and smooth muscle, and the distal third part is composed of smooth muscle. The diameter of the lumen of the esophagus, in general, increases from the proximal portion distally. The narrowest portion is the esophageal introitus. Narrowing of the lumen is found at the level of the aortic arch, the left main bronchus, and the diaphragm. The nerve supply arises from the vagus and sympathetic systems.[1]

Physiologic Aspects

This important organ has only one function: that of conveying food from the pharynx to the stomach. The act of swallowing occurs in three stages. It is beyond the scope of this paper to go into the details of this.

The vagus and sympathetic nerves innervate the esophagus. It is rather generally agreed that the vagus nervous system supplies most of the afferent and efferent impulses for the organ. The role of the sympathetic nervous system in supplying the esophagus is not well known.

Diagnosis in General

Esophageal pain may be secondary to esophageal spasm, esophageal distention, or ulceration. The painful sensations usually are felt in the retrosternal or retroxiphoid regions, but may be referred over the anterior part of the thorax and into the neck, or into the external auditory canals and into the angles of the jaws. The pain may be referred to the back at the level of the tenth and twelfth thoracic vertebrae or it may be referred down both arms. Thus, it has been confused with the pain caused by coronary disease or disease of the gallbladder.[1]

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* Read at the Eighteenth Annual Scientific Assembly of the Society, October 6, 1947.

In the evaluation of any instance of esophageal disease, it is well to obtain the history of the patient in detail. The patient who has rapid, progressive dysphagia of only a few months' duration generally has a cancer of the esophagus. The patient who has more difficulty in swallowing liquids than in swallowing solids and in whom the liquids regurgitate out through the nose as a rule will have a neurologic condition, and no lesion will be disclosed in the esophagus during esophagoscopy. Accidents involving foreign bodies are accompanied by sudden severe dysphagia after an episode of choking.

TABLE 1

Most Common Conditions Which Cause Dysphagia in Superior Portion of Esophagus at Cricopharyngeal Level[2]

1. Intrinsic lesions of the esophagus
    - a. Carcinoma
    - b. Benign stricture
    - c. Pharyngo-esophageal diverticulum with secondary esophageal stenosis

2. Neurologic lesions
    - a. Bulbar palsy
    - b. Amyotrophic lateral sclerosis with bulbar involvement
    - c. Infantile paralysis with bulbar involvement
    - d. Myasthenia gravis

3. Extrinsic lesions
    - a. Laryngeal lesions
        - (1) Inflammatory
        - (2) Neoplastic
    - b. Tumors of the neck
        - (1) Goiter
        - (2) Other tumors

4. Foreign bodies

5. Functional conditions
    - a. Functional dysphagia
    - b. Hysterical dysphagia

In a consideration of the functional and organic conditions which most frequently affect the esophagus, it might be well to give some attention to those conditions which can cause difficulty in the proximal portion, and then to discuss those conditions which are found in the more distal portions of the organ. It is obvious that some of the conditions, such as stricture and tumor, can affect any part of the esophagus.

The most common conditions which cause dysphagia in the superior portion of the esophagus at the cricopharyngeal level are listed in table 1.[2]

Pharyngo-esophageal Diverticulum

This is really a false diverticulum of the pharynx, but it is well to consider it with esophageal lesions because of its close proximity to the esophagus and because, as the lesion becomes larger, it will cause pressure on the superior portion of the esophagus to such a degree that complete esophageal obstruction may occur. The lesion is really a hernia in which the mucosal elements of the pharynx herniate through the muscular elements. It is possible that it is the result of rapid swallowing and the increased force necessary to overcome the tone of the cricopharyngeus sphincter.

This lesion usually occurs after a person is 40 years of age. It is 8 times as frequent in men as in women. Symptoms may vary. At first there may be a tickling sensation in the pharynx. In the past, this at times was attributed to "too prominent a uvula," and we have seen patients who have undergone uvulectomy in an erroneous attempt to correct the early symptoms of a pharyngeal diverticulum. As the size of the pharyngeal sac increases, particles of food will become lodged in it and remain incarcerated for variable periods. The most frequent offender is meat. As the sac becomes larger, a gurgle almost always is heard after the act of swallowing. The patient frequently will refuse to dine with friends because of this sound. As the sac enlarges, it may descend into the thorax and cause secondary esophageal obstruction (fig. 1). A cough frequently develops which usually is most troublesome at night because of the overflow of fluid and food from the sac into the respiratory passages. Thus, aspirational tracheobronchitis, pneumonia or pulmonary abscess may develop secondary to this lesion.

The physical observations are typical in about 90 per cent of cases of pharyngeal diverticulum.

They are obtained by having the patient flex his head slightly and swallow water. After the patient has swallowed, pressure is exerted externally on the neck and a gurgle is heard. Since most of the diverticula arise from the left and posterior wall of the pharynx, pressure is exerted over the caudal third portion of the left sternocleidomastoid muscle. The diagnosis is made by roentgenologic examination of the pharynx after the patient has swallowed barium sulfate. The barium enters the herniated portion of the pharynx and appears as a globular mass. The outstanding feature of esophagoscopy is the ease with which it is possible to enter the pharyngeal sac. The situation of the orifice of the sac as a rule is posterior, to either the left or right.

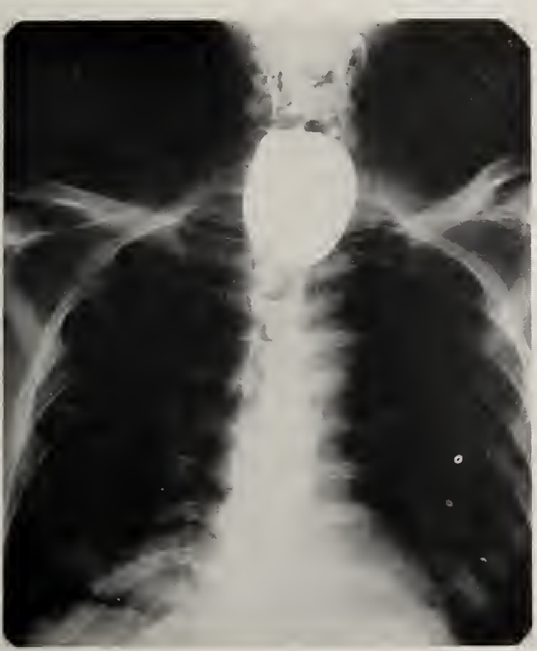

FIG. 1. Pharyngeal diverticulum causing extrinsic pressure on the superior portion of the esophagus.

The treatment of choice is surgical excision performed in one stage.

DIVERTICULUM OF THE LOWER PART OF THE ESOPHAGUS

Diverticula of the middle third of the esophagus are thought to be caused by traction on a portion of the esophageal wall exerted by inflamed mediastinal lymph nodes. It is important to know that such diverticula rarely cause symptoms. About the only symptom they might produce is secondary spasm of the distal half of the esophagus. On extremely rare occasions they have been reported as having eroded into the left bronchial tree and caused an esophagobronchial fistula. The most important feature to be remembered about uncomplicated diverticula which occur at this level is that they rarely require any form of treatment (fig. 2).

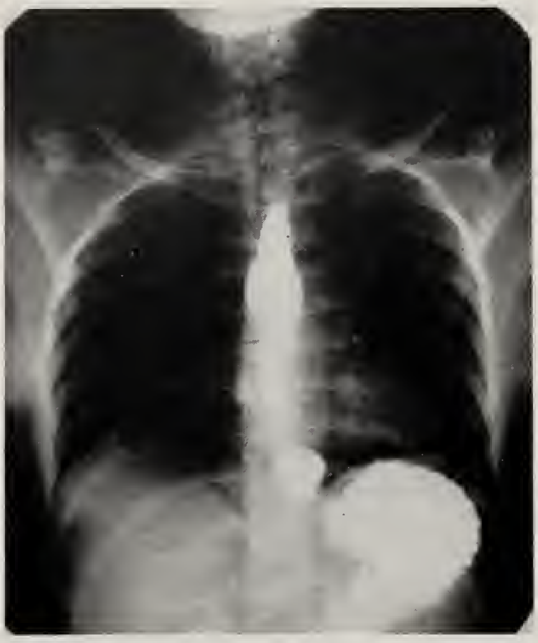

FIG. 2. Asymptomatic diverticulum of the middle third part of the esophagus which was found accidentally while the stomach was being examined for a possible lesion. Note the esophageal hiatal hernia which was causing the patient's symptoms.

Epiphrenic diverticula occur just proximal to the cardia, and may reach a large size. Material from a large sac may be regurgitated into the mouth and cause nocturnal cough as a result of aspiration. It is of interest to find a large diverticulum just proximal to a sphincter. The occurrence of such a lesion in this situation may be due to the force exerted in this region which is necessary to overcome the cardiac sphincter (fig. 3).

The diagnosis is made by roentgenologic means.

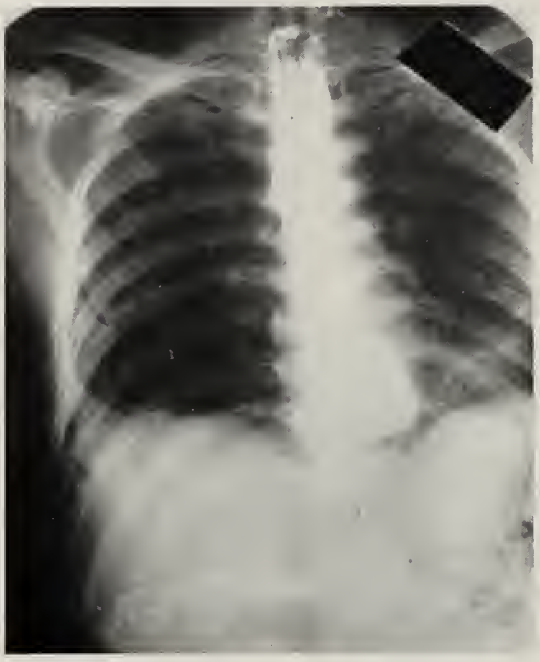

FIG. 3. Large esophageal diverticulum situated just proximal to the cardia.

The treatment of the larger epiphrenic diverticula which cause sufficient symptoms is surgical excision.

ESOPHAGEAL VARICES

The causative background of the formation of esophageal varices is unknown. Various theories have been presented. Some workers feel that the primary disturbance lies in the vascular regulatory mechanism of the spleen. They believe that arterial blood flows with very little obstruction into the venous system and produces a state similar to an arteriovenous fistula. Other men think that the difficulties arise from obstruction in the splenic or portal vein, which in turn causes increased pressure in the portal or splenic venous system.[3] Esophageal varices result. The veins which lie in the submucosa of the esophagus are poorly supported by connective tissue. They lie very close to the mucosal surface, and thus dilate very rapidly when an increased amount of blood flows through them.[3]

When seen roentgenoscopically, esophageal varices appear as elongated folds running parallel to the longitudinal axis of the esophagus. At times it is impossible to demonstrate esophageal varices by roentgenologic means. When seen at esophagoscopy, the veins have the appearance of bluish-red folds which course in the longitudinal axis of the esophagus. It is easy to compress them with the tip of the esophagoscope. They increase in size when the patient strains.

Various procedures have been recommended for the prevention of bleeding from esophageal varices. Splenectomy has been performed in an attempt to reduce the volume of blood flowing through the portal system in cases in which the varices have been caused by splenic anemia. Hemorrhage after splenectomy occurs in about 50 per cent of cases, and fatal bleeding is a frequent cause of death.

Crafoord and Frenckner,[4] and Moersch[3] have injected esophageal varices with sclerosing solutions through an esophagoscope. It is extremely important to limit this type of treatment to those patients who do not exhibit signs of gastric varices at the time of gastroscopy, since it is impossible to treat gastric varices through the esophagoscope.

More recently, venous anastomoses have been established between the portal and systemic circulations. The left renal and splenic veins have been anastomosed. It is too early to evaluate adequately the merits of these procedures.

ESOPHAGITIS

Esophagitis is the most frequent lesion of the esophagus. It may occur after prolonged vomiting, the passage of stomach tubes, or the ingestion of irritants. It may be secondary to esophageal hiatal hernia of the sliding type, since in such a condition the cardia loses much of its sphincteric value and gastric contents will be regurgitated back into the esophagus. The hydrochloric acid of the stomach may prove very irritating to the esophageal mucous membrane, and may even cause ulceration and formation of stricture. Esophagitis may occur with any acute systemic infection. The symptoms of esophagitis as a rule are a sensation of burning in the retrosternal region, dysphagia, and painful swallowing.

If the esophagitis is severe, it may be necessary to withhold feedings for a few days and to give food and fluids parenterally. At times it is necessary to administer morphine for the relief of pain. After the acute manifestations subside, the patient can begin to employ a liquid diet and then a bland diet. If the esophagitis has been severe, the condition of the patient should be followed very carefully for at least 6 to 8 weeks to make certain that an esophageal stricture does not develop. At times it takes this long a period before the connective-tissue reaction of the esophagus becomes manifest and causes a stricture.

STRICTURES OF THE ESOPHAGUS

As severe esophagitis heals, it may lead to the formation of a stricture (fig. 4). Concentrated alkalies, such as lye, and strong acids, taken with suicidal intent or by accident, can very readily cause severe ulcerative esophagitis which, while healing, will cause a connective-tissue reaction with formation of scar tissue sufficient to cause a stricture. The pernicious vomiting of pregnancy or the chronic regurgitation of gastric acids, such as occurs with esophageal hiatal hernia, also can cause esophageal stricture. If the development of a stricture is feared, it is well to ask the patient to swallow a silk thread and keep this thread in place during the period of observation. Then, if the esophagus should suddenly completely close as a result of a stricture, with the thread in place it will be possible to open the esophagus by means of dilation. The thread serves as a guide for dilating instruments. If the esophagus closes completely without a thread in place, the problem becomes a much more serious one. The patient should swallow at least 15 feet (4.6 m.) of twisted silk thread. This enables the distal end of the thread to become engaged in the loops of small bowel, and thus makes it possible to use it as a guide in the passing of the dilating sounds.

Esophageal strictures are, for the most part, best treated by dilating them with graduated sounds. If the injured portion of esophagus can be used again as a tube to convey food, it will be far more satisfactory than the construction of an artificial esophagus or the performance of resection of the involved part of the esophagus and establishment of an esophagogastric anastomosis. In rare instances, such procedures are necessary,

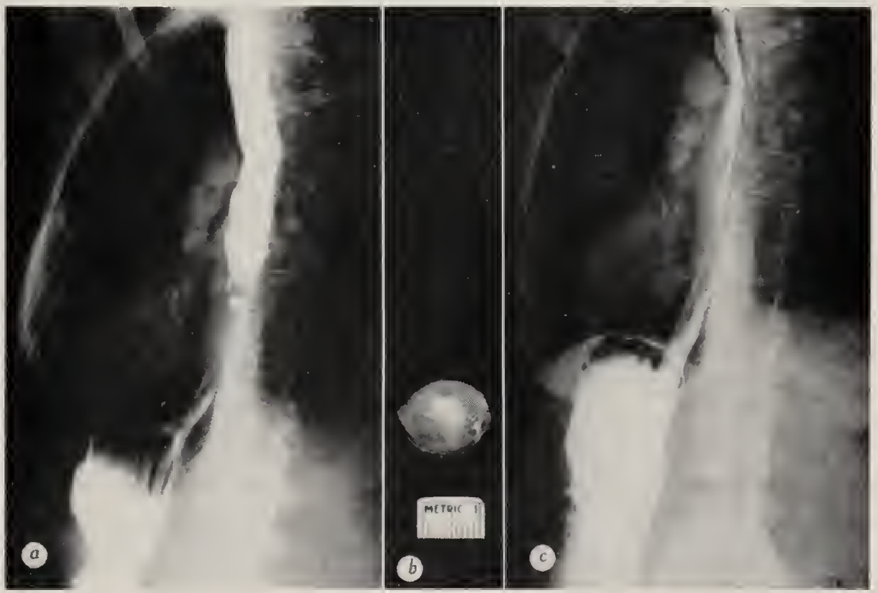

FIG. 4. (a) Stricture of the esophagus which followed typhoid fever; a foreign body is lodged in the stricture. At the time of roentgenologic examination of the esophagus this was thought to be due to tumor. (b) Esophagoscopy revealed a plum pit, which was removed. (c) The esophagus after removal of the foreign body and esophageal dilation.

but the end results of dilation of esophageal strictures generally are excellent.

Foreign Bodies

Accidents involving the esophagus caused by the lodging of foreign bodies usually occur as the result of carelessness (fig. 5). Most of them occur in young children who have placed undigestible objects in the mouth and have accidentally swallowed them. An open safety pin carelessly left in the baby's crib is a foreign body which the esophagoscopist frequently sees lodged in the gullet. Carelessness in the preparation of food accounts for some of the accidents. Pieces of wire, broken glass and staples have been swallowed with food. Adults who wear upper dentures may accidentally swallow undigestible material such as chicken bones, since during the act of chewing they cannot feel these objects against the hard and soft palate because of the presence of the denture.

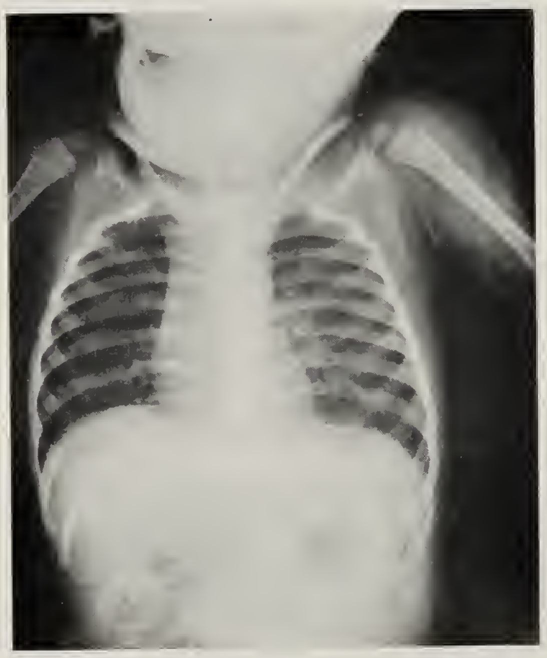

Fig. 5. Rolled-up sulfathiazole ointment tube swallowed accidentally by an infant.

The first symptom of ingestion of a foreign body is a choking or strangling sensation at the cricopharyngeal level. Most foreign bodies become lodged at this level. After they become impinged, it generally becomes impossible for the victim to swallow, because of pain. If the foreign body is opaque in the roentgenogram, it will be possible to determine its size and location. The widest diameter of the foreign body presents itself in the coronal plane, since the diameter of the esophagus is greatest in this plane. Nonopaque foreign bodies will not be seen roentgenographically. If the history is strongly suggestive of the presence of an esophageal foreign body, esophagoscopic removal of the foreign body should be accomplished with the least possible delay.

Carcinoma of the Esophagus

The esophagus is the site of carcinoma in about 6 per cent of all cases of carcinoma. Carcinoma of the esophagus occurs in men 5 times as frequently as in women. In women carcinoma frequently is found at the cricopharyngeal level, whereas in men it is frequently found at the esophagogastric junction. The history includes rapidly developing, progressive dysphagia so far as solids are concerned; then dysphagia in respect to soft foods, and finally, in respect to liquids. Rarely, hemorrhage or pain will be the first symptom. As the esophageal obstruction progresses, regurgitation, with the aspiration of esophageal contents, will be noticed. There will be a rapid loss of weight and strength as a result of inadequate caloric intake.

The diagnosis is made by roentgenologic and esophagoscopic study of the lesion. Roentgenograms made with the aid of barium disclose an irregular filling defect. To make absolutely certain of the diagnosis, it is necessary that esophagoscopy be carried out and that tissue be removed for microscopic examination. At times, carcinoma at the esophagogastric junction will cause a foreshortening of the esophagus and will cause the stomach to be drawn into the thorax. To the roentgenologist the lesion will look like a short-esophagus type of hiatal hernia. Biopsy will be necessary to establish a diagnosis. Conversely, in the roentgenogram foreign bodies in the esophagus at times resemble a carcinoma.

The only curative treatment for carcinoma of the esophagus is resection of the lesion, when this can be accomplished. Unfortunately, metastasis occurs relatively early in many patients, and resection then has only a palliative effect.

Palliative procedures that can be employed are (1) deep roentgen-ray therapy, (2) esophageal dilation, and (3) gastrostomy. At the Mayo Clinic it has been our policy to try to keep the esophageal lumen open as long as possible in order that the patient may eat. We have tried to avoid gastrostomy whenever possible.

Other malignant tumors of the esophagus are rhabdomyosarcoma, which arises from the striated-muscle portion of the esophagus, and leiomyosarcoma, which arises from the smooth-muscle portion of the esophagus. These are very rare.

Benign Tumors

Benign tumors of the esophagus are relatively rare. They may become large before they cause symptoms. Fifteen instances of benign tumor of the esophagus were found in a group of 11,000 patients who came to the Mayo Clinic because of dysphagia. On the other hand, 44 cases of benign tumor were found during 7,459 postmortem examinations.[5]

Leiomyomas are the most common benign tumors of the esophagus. Other benign tumors are hemangiomas, papillomas, polyps, neurofibromas, lipomas, adenomas, myofibromas and cysts.

For the purpose of description, tumors have been classified as (1) mucosal or intra-esophageal, or (2) intramural or extramucosal tumors, depending on where they arise in the wall of the esophagus. Those which present on the mucosal surface are very likely to become polypoid; a long pedicle may develop as a result of the constant pull exerted by the peristaltic action of the esophagus. Pedunculated tumors may be regurgitated into the mouth; at times they protrude from the mouth after vomiting. They may cause laryngeal obstruction in this position. Tumors arising from the outer coats of the esophagus seldom become pedunculated.

When benign tumors of the esophagus produce symptoms, the symptoms usually are those of dysphagia, or, the tumor may be regurgitated into the mouth. Rarely the mucous membrane becomes ulcerative and causes hemorrhage. Tumors in the lower part of the esophagus may cause epigastric distress. Benign tumors cause a smooth filling defect in roentgenograms of the esophagus. At times, when they become large, they may cause such a degree of dilation of the esophagus that the picture may resemble that of cardiospasm. Esophagoscopy may reveal a pedunculated tumor, but when the tumor arises in the wall of the esophagus it may be impossible to distinguish the picture of benign tumor from that seen when extrinsic pressure on the esophagus exists.

It is impossible at times to secure a satisfactory specimen for biopsy from a benign tumor.

A small, asymptomatic benign tumor does not require treatment. Those tumors that produce symptoms should be removed surgically.

Cysts may occur in the esophageal wall and cause variable degrees of esophageal obstruction. They should be removed when they are causing symptoms or when the diagnosis remains in doubt.

Diffuse Spasm of the Esophagus

Spasm of the distal portion of the esophagus can be produced experimentally by the stimulation of various nerves. Clinically, spasm of the lower part of the esophagus has been observed in diseases of the esophagus, stomach, gallbladder and biliary tract. Occasionally, it has been observed in cases of severe organic heart disease. Diffuse spasm of the distal half of the esophagus may occur in highly nervous persons when they are subjected to undue emotional stress and strain.

The chief characteristics of diffuse spasm of the distal half of the esophagus are dysphagia and pain. The pain is characterized by severe retroxiphoid or retrosternal pain which will extend over the superior part of the anterior thorax and into the arms and the mandible. At times it will extend to the external auditory canal. It may extend through to the lower thoracic part of the spinal column and thus may be confused with disease of the gallbladder. The pain at times will be thought to be caused by organic heart disease or by various lesions in the stomach.

Roentgenologic examination of the esophagus is very important. If a patient is free of symptoms at any particular time, the results of roentgenologic studies may be negative. If the study is made during a period when the patient is having symptoms, three main pictures may be seen: (1) diffuse irregular spasm, (2) multiple spastic segments (fig. 6), and (3) diffuse narrowing of the distal half of the esophagus. The picture should not be confused with that of cardiospasm, in which the obstruction exists only at the cardia and in which one sees marked dilation of the esophagus above the level of the obstruction.

Esophagoscopic examination will reveal diffuse spasm of the distal half of the esophagus, and the examination may be difficult because of this spasm. Spasm may exist even though the procedure be performed with the patient under the influence of general anesthesia.

No satisfactory treatment for diffuse spasm of the distal half of the esophagus has been evolved. It is extremely important that such factors as fatigue, anxiety, nervous strain and emotional upsets be avoided, because these almost always precipitate exacerbation of symptoms. Almost all persons who suffer from primary diffuse spasm of the lower part of the esophagus are tense and nervous. At times esophagoscopy and dilation of the esophagus by means of esophageal sounds have given some relief, but the results are very poor in comparison with those obtained by dilation of the esophagus in cases of cardiospasm.

CARDIOSPASM

Cardiospasm is an occlusion at the cardiac sphincter without an organic lesion at the site of obstruction. There is dilation of the esophagus above the site of obstruction. Clinically, there usually is marked dysphagia at the retroxiphoid level, with regurgitation. Another symptom may be retroxiphoid pain, which may or may not extend to the lower thoracic part of the spinal column or over the anterior part of the thorax to the external auditory canals and the mandible. At times this pain will extend to the shoulders and down the arms. Nocturnal regurgitation of esophageal contents may occur, with aspiration of part of this material into the tracheobronchial tree. Thus, aspirational tracheobronchitis, pneumonitis (fig. 7) or abscess of the lung may

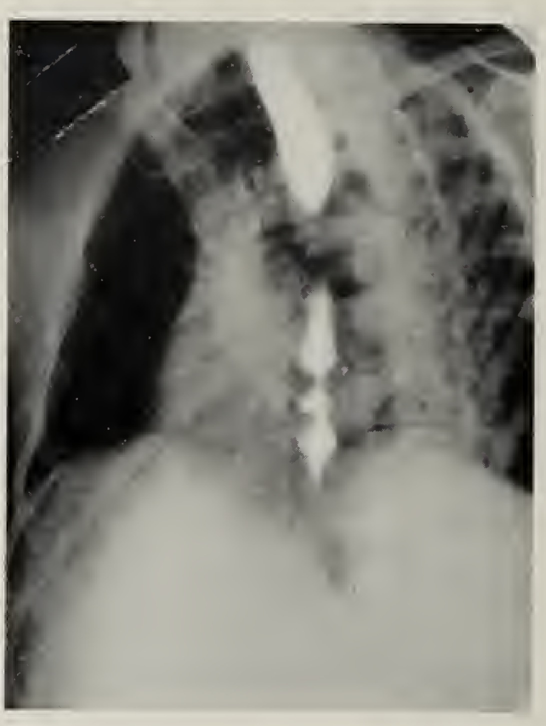

FIG. 6. Multiple spastic segments of the distal half of the esophagus.

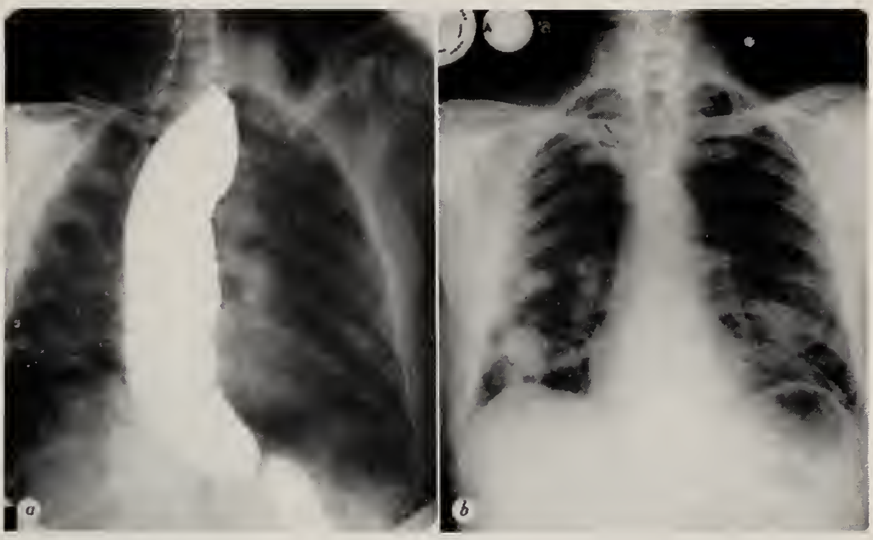

FIG. 7. (a) and (b) Cardiospasm with aspirational pneumonitis.

occur. The right lung is affected more frequently than the left one.

The cause of cardiospasm is not known, but the condition probably is due to some pathologic process in the nerve plexuses of Meissner and Auerbach. Some workers have proposed the theory that cardiospasm is a functional condition secondary to emotional and nerve strain. This is very hard to accept, since instances of cardiospasm occurring in the newborn have been reported. Also, as a group, patients who have this lesion are not neurotic.

Cardiospasm occurs more frequently in men than in women: the ratio in this respect is 3:2.[6] It may occur at any age. Marked dehydration and loss of weight may occur. Death may ensue if treatment is not carried out when cardiospasm is severe.

The type of dysphagia from which patients with cardiospasm suffer is of interest. They are rather likely to experience most of their difficulties in the ingestion of cold liquids or foods, apples, popcorn, or carbonated beverages. Solid foods may be swallowed with greater ease than liquids. Complete esophageal obstruction may develop in the patient who has cardiospasm. The esophagus may hold as much as 2 to 3 liters. Some patients will learn various methods of increasing intra-esophageal pressure so that food will be forced into the stomach. This, however, may involve some danger, since esophageal perforation might be caused thereby.

The diagnosis of cardiospasm can be made by the history, roentgenologic study of the esophagus, and esophagoscopy. Roentgenologic study of the esophagus with barium sulfate reveals a smooth, regular obstruction at the cardia, with a widely dilated esophagus which will become fusiform, flask-shaped or rather tortuous in its caudal portion, resembling a plumber's U-shaped drain trap.

The treatment of choice in the great majority of cases of cardiospasm is esophageal dilation by means of the Plummer dilator. This procedure gives very satisfactory results and is accompanied by very little hazard when it is used correctly. The patient is asked to swallow 15 feet (4.6 m.) of twisted silk thread at the rate of 1 foot (0.3 m.) an hour. This will be enough thread, if it is swallowed correctly, to engage the distal end in the loops of jejunum. The thread is passed through the cannulated portion of the dilating instrument and is used as a guide. The first treatment for cardiospasm consists of passage of a no. 50 French sound past the cardia. Two days later the Plummer hydrostatic dilator is used. The distance from the upper teeth to the cardia is measured by, first, the passage of a blunt no. 41 French sound. The hydrostatic dilator is passed so its central portion is securely engaged in the cardia, and the dilator is distended up to its full capacity at a pressure of 22 to 24 feet (6.7 to 7.3 m.) of water.

The results of dilation are very satisfactory. Before the patient is dismissed, it is ascertained that he is able to eat all types of food. If there is dysphagia in respect to any food, further dilation may be necessary. If a patient is completely relieved by dilation, the chances are very good that he will never require further treatment. A certain number of patients may experience recurrence of symptoms shortly, or as long as 17 years, after treatment.

When the esophagus is large and tortuous, it is at times impossible to dilate it. In such a case it may be necessary to carry out esophagogastrostomy.

Traumatic Perforation of the Esophagus

The esophagus may be perforated by instrumentation, by penetrating or perforating wounds to the thorax, or by the accidental ingestion of foreign bodies. At times perforation occurs secondary to severe esophagitis or to a neoplasm. Rarely, the esophagus will be perforated by a direct blow to the thorax or by forcible attempts to swallow or by vomiting.

The first symptom of perforation usually is pain in the retrosternal or cervical region. If the perforation is situated low in the esophagus, there may be reflex pain and rigidity over the abdomen, and the physician will suspect that an abdominal viscus has been ruptured.

The first signs of esophageal perforation as a rule are those of fever and cervical subcutaneous emphysema. As time goes on, signs of mediastinal widening or fluid in the left pleural space will develop.

Esophageal perforation is always serious because of the mediastinitis that develops. As soon as the diagnosis has been made, the mediastinum should be drained. In perforation of the upper part of the esophagus, this drainage can be established in the cervical region. In perforations around the cardia, transthoracic extrapleural mediastinotomy will have to be carried out for this purpose.

In war wounds of the thorax, when esophageal perforation was suspected, early drainage was the rule in most instances. The results of early drainage are far superior to those obtained when expectant treatment with chemotherapeutic compounds is relied upon.

Esophageal Hiatal Hernia

Esophageal hiatal hernia is the most frequent type of diaphragmatic hernia.[7] There are three types of hiatal hernia: (1) the sliding type, (2) the short-esophagus type, and (3) the para-esophageal type.

In the sliding type of hernia, the stomach slides up into the thorax through the esophageal hiatus in the region of the posterior mediastinum. The portion of the stomach that has protruded above the diaphragm will increase during recumbency or when pressure is applied to the anterior abdominal wall. In small hernias of this type, the stomach will descend to its normal position when the patient stands up. The hernia can then be demonstrated only during recumbency or by the exertion of pressure on the anterior abdominal wall. This is the most common type of hiatal hernia.

The short-esophagus type of hiatal hernia is the second most common type of hiatal hernia. The esophagus is foreshortened by a previous inflammatory process or by a congenital anomaly. Most of these lesions, when seen in adult persons, are acquired (fig. 8).

The para-esophageal type of hiatal hernia is the least common of the three types of hiatal hernia. The esophagogastric junction may occupy its normal level, but a portion of the fundus of the stomach will project up into the thorax through the esophageal hiatus, and will cause extrinsic pressure on the lowermost part of the left lateral wall of the esophagus.

The most frequent symptoms of hiatal hernia are the regurgitation of sour-tasting gastric secretion, pain, dysphagia and hemorrhage. The regurgitation of gastric content occurs during recumbency, when the patient is bending over, or when external pressure is applied to the abdominal wall. It occurs as a result of the fact that the cardia loses most, if not all, of its sphincteric action when sliding and short-esophagus hernias of any size occur. Gastric contents will enter the esophagus during recumbency or when pressure is placed on the anterior wall of the abdomen. This may lead to esophagitis or even ulceration, with a dull retrosternal burning. At times the symptoms may simulate those of peptic ulcer, except for the fact that food aggravates the distress.

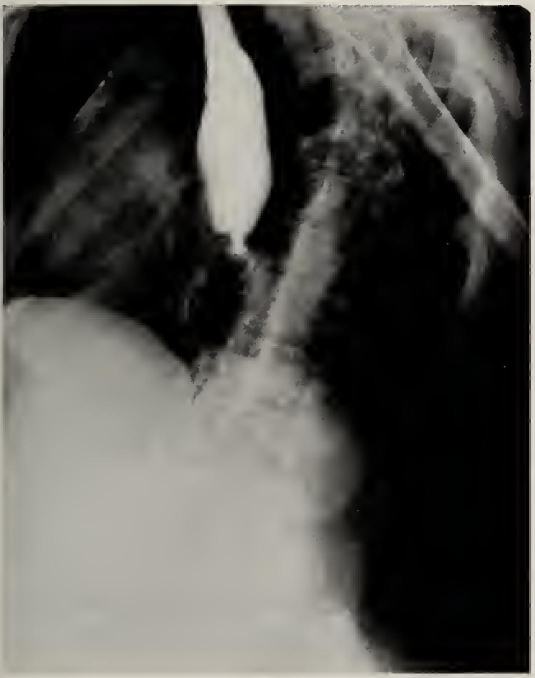

Fig. 8. Short-esophagus type of esophageal hiatal hernia, the first symptoms of which developed when the patient was 50 years old.

Esophageal hiatal hernia may cause a reflex diffuse spasm of the lower part of the esophagus, and with it, esophageal pain and dysphagia. The symptoms may be thought to be caused by heart disease, disease of the gallbladder, peptic ulcer or cardiospasm.

At times large hiatal hernias are asymptomatic, or the patient will come to the physician because of the symptoms of secondary anemia resulting from an oozing type of bleeding which may occur in the stomach or at the esophagogastric junction, brought about by mechanical or chemical trauma. At times large hernias may become strangulated; this will cause severe pain and dysphagia.

Roentgenologic studies of the esophagus and stomach with the patient in the recumbent position and with pressure being exerted on the anterior wall of the abdomen almost always demonstrate the hiatal hernia. Esophagoscopy should be carried out for all patients who exhibit the roentgenologic picture of hiatal hernia, to exclude the possible presence of such a lesion as carcinoma of the lower part of the esophagus, with foreshortening of the esophagus. A carcinoma of the esophagus will cause the superior portion of the stomach to herniate through the esophageal hiatus and make it appear that a short-esophagus type of lesion is present.

The chief observation at the time of esophagoscopy in the sliding type of hernia is that the cardia has lost most of its sphincteric action; the physician will see gastric juice coming up into the esophagus. The lower part of the esophagus at times will show signs of esophagitis. A variable portion of the stomach will be situated above the diaphragmatic level.

The short-esophagus type of hernia generally will, at esophagoscopy, reveal the esophagogastric junction to be markedly inflamed and almost always ulcerated. At times this ulceration is severe, and it is impossible to distinguish between this lesion and a carcinoma without biopsy. When there is any doubt, a specimen for biopsy always should be taken. As a rule, the cardia is gaping, and gastric juice can be seen being regurgitated up into the esophagus.

In the presence of a para-esophageal hiatal hernia, variable degrees of extrinsic pressure are exerted on the left lateral wall of the lower part of the esophagus.

Most patients who have esophageal hiatal hernias are obese. It is urgent that they reduce

(*Continued on page 132*)

CLINICAL STUDIES IN SCHIZOPHRENIA*

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IT WOULD appear from the record that the Belgian, Morel, first used the term "démence précoce" in 1849 to describe what we now consider to be hebephrenia. He considered this to be a degenerative disease of hereditary origin. This term gained in usage until Kraepelin finally adopted it as "dementia praecox" and proceeded to describe many different subgroups.

In the meantime Kahlbaum in 1868 described a mental condition which he called catatonia. This condition included such symptoms as melancholia, mania and stupor, and frequently the terminal state was one of apparent deterioration and dementia. Kahlbaum emphasized motility disturbances from marked excitement to mute, retarded states, including flexibilitas cerea. This condition was sometimes called tension insanity.

About 1870 Hecker, who was a pupil of Kahlbaum, described more specifically the symptoms mentioned by Morel and named this disorder hebephrenia. It was thought to be a progressive disease of puberty and adolescence which often began with melancholia, mania or confusion, and rapidly proceeded to apparent dementia with silly, bizarre behavior.

About 1889 Kraepelin, having adopted the term dementia praecox, decided that Hecker's hebephrenia and Kahlbaum's catatonia, together with a group of patients classified dementia paranoides, should be considered subgroups of dementia praecox and named them hebephrenic, catatonic and paranoid types. Later he added a fourth subgroup, the simple type, to characterize the condition of gradual regression and loss of interest without obvious hallucinations and delusions. This classification is still widely accepted today and is the classification recommended by the American Psychiatric Association in collaboration with the National Committee for Mental Hygiene. It is followed in most recognized hospitals for mental disease today with the exception of those in the United States Army. Kraepelin considered that these various clinical syndromes were evidences of but a single disease, which he considered endogenous and primarily organically determined rather than heredo-degenerative or environmentally determined. He had also considered the possibility that they might be due to auto-intoxication.

At about the same time some of the other workers in the field were turning away from a consideration of organic etiology to studies in environmental and acutely personal, emotional reactions. The work of Mesmer, Braid and Charcot on hypnosis, the work of Bernheim on suggestion, the reports of Janet on psychologic mechanisms, as well as studies of the emotional components of hysteria by Breuer and Freud, all influenced and advanced the trends toward non-organic etiology.

About 1908 Bleuler further extended the concepts of dementia praecox through his very careful clinical observations. It was beginning to be realized that the term dementia praecox was possibly a misnomer, and as Bleuler decided that the primary feature of this condition was not terminal dementia, but rather a well-defined splitting of psychic functions or personality, he suggested that the name schizophrenia be adopted to apply to those patients who recovered. Although Bleuler acknowledged the application of Freud's ideas in his concept of schizophrenia, it would appear that Bleuler still thought that this condition was primarily of organic etiology, which was less a deficiency than an intoxication. He believed that definite brain cell pathology had been proven.

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* Presented at the Second Intensive Postgraduate Course, George Washington University School of Medicine, February 27, 1947.

The terms dementia praecox and schizophrenia are today used synonymously, although in some clinics schizophrenia indicates a more acute and recoverable condition and dementia praecox a more chronic condition with poor prognosis. At about the time of Bleuler's introduction of the term schizophrenia, Adolph Meyer outlined a behavior theory of the etiology of dementia praecox, in which he stressed the importance of the life history and of faulty habit patterns; he felt that the condition was essentially a failure of adaptation and that the condition should be described not as specific disease entities, but more as reaction types.

Since the turn of the century research in dementia praecox (schizophrenia) has proceeded in the anatomic, biochemical, endocrine, genetic, infectious, physiologic and psychologic fields. A detailed review on this subject is given in the monograph on "Research in Dementia Praecox" (1936) by Dr. Nolan Lewis and in the report of Dr. Leopold Bellak with Elizabeth Willson of St. Elizabeths Hospital on the "Etiology of Dementia Praecox," published in the *Journal of Nervous and Mental Disease* for January 1947.

There were many contributors to the literature on schizophrenia, including Freud, Jung, William A. White, Vigotsky, Cameron, Sullivan, and many others. It remained for our own St. Elizabeths Hospital psychologists, Richmond and Kendig,[1] to conclusively show that dementia praecox (schizophrenia) does not progress to gross intellectual deterioration as previously thought, but that the core of the schizophrenic difficulty is a lack of ability at sustained effort and attention.

It seems fair to state that the consensus today leads to the viewpoint that schizophrenia is not a specific disease process but is considered a syndrome or type of reaction which an individual develops in response to personal difficulties, and that this syndrome or reaction is influenced by hereditary, constitutional, and environmental, as well as psychogenic and physiogenic factors.

The widely accepted classification of dementia praecox (schizophrenia) is as follows:

1. Simple type
2. Hebephrenic type
3. Catatonic type
4. Paranoid type
5. Other types to be described, such as mixed or undifferentiated.

It is now well recognized that it is extremely difficult to categorize the multitudinous symptoms of this condition and assign a single named subtype with any success. Such assignment of a subgroup can only be made on the predominance of symptoms considered characteristic for that group, with the clear reservation that one will not be surprised to see the predominance of symptoms possibly swing to another subgroup. It is fortunate that the therapy of the patient is not dependent on the named diagnosis. Some benefit does accrue through the use of our present classification of schizophrenia, and it would appear that these named subgroups are with us to stay. Some psychiatrists believe that diagnosis by subgroup is more easily made very early in the patient's illness, but this has not been my personal experience. In the acute chaotic states of early schizophrenia the personality of the patient, as well as his behavior and expression, is so disorganized that no specificity of symptoms of the subgroups may be noted. When the trends of distorted thinking, feeling and acting are more definitely organized, these are usually channelized into a more definite and characteristic subtype response, and the diagnosis becomes easier to establish.

At this hospital for the past 20 years I suppose without doubt we have seen many more cases of dementia praecox (schizophrenia) than at any other hospital for mental disease in the United States. This is due to the fact that in addition to civilian patients we have admitted young men from the armed forces who were principally in the age group in which dementia praecox shows its highest incidence. I have personally examined several thousand such patients, about 60 per cent of whom were so diagnosed. In one group made up of 1,000 consecutive patients from the United States Navy placed under my supervision, 69 per cent were diagnosed dementia praecox (schizophrenia). Of these, 43 per cent were catatonic in type, 32 per cent undifferentiated in type, 10 per cent paranoid in type, 10 per cent of mixed type, 4 per cent of hebephrenic type, and 0.3 per cent of simple type. Most of these patients showed symptoms of acute schizophrenia. The symptoms showed marked variability from day to day and even from hour to hour. On one day the symptoms might be primarily paranoid, and the patient would then drift quickly into typical catatonia, with muteness, refusal to take food, and catalepsy. These changes in condition are often sudden, dramatic, and startling unless one is familiar with them. Suicidal ideas, homicidal drives, panic states, terrifying auditory hallucinations, paranoid projections, and other marked evidences of disorganization of personality are common. That these acute schizophrenic reactions in military personnel are different from the chronic schizophrenic reactions more often seen in civilian life has been discussed in a previous communication.[2] It would seem without doubt that in the former the onset is more abrupt, the course more tempestuous, the situational factors more obvious, and the prognosis vastly better than in the civilian group. In this military group our figures showed that 47 per cent recovered and 27 per cent improved, compared with the average of the 16 to 20 per cent combined recovery and improved rate variously reported for civilian patients with the same diagnosis. In many of the military patients with acute schizophrenia no history can be elicited of earlier failing adaptation or the development of so-called "schizoid" personality traits. In these patients the prognosis is materially better than in the patients in whom such a history is obtained. The prognosis is also better when the situational elements are profound, when the onset is quite sudden, and when the affect is explosive in character.

In some of the cases of acute schizophrenia and in most of those of chronic schizophrenia there is a long history of failing harmonious function in personal relationships and mode of living. Peculiar, strange, and distorted ideas and behavior become slowly evident, together with diminution of interest, shallowness of emotion, restriction of interpersonal relationships, and withdrawal into self. Thought abstractions, reveries, daydreaming and building of castles in the air become pleasurable experiences, and the patient seems to drift from the complex realities of life into this less difficult but unacceptable pattern of adaptation. These phenomena are often followed by more obvious psychotic expressions such as hallucinations, delusions, stuporous states, or acute disorganized mental excitements. It is only when such acute expressions become evident that the family of the patient realize that he is actually mentally ill, and only at this late stage do they sometimes seek psychiatric help. This is unfortunate, because one of the things we do know in psychiatry is that the earlier the treatment of schizophrenia (no matter by what method), the better the prognosis.

The statistical manual for the use of hospitals for mental disease, prepared by the American Psychiatric Association in collaboration with the National Committee for Mental Hygiene, describes the characteristics of the various subtypes of dementia praecox as follows:

1. *Simple Type.*—Cases to be classified under this heading show essentially defects of interest with gradual development of an apathetic state but without other strikingly peculiar behavior and without expression of delusions or hallucinations.

2. *Hebephrenic Type.*—Cases to be classified under this heading show prominently a tendency to silliness, smiling, laughter which appears inconsistent with the ideas expressed; peculiar, often bizarre, ideas are expressed, neologisms or a coining of words or phrases not infrequently occur, and hallucinations which appear pleasing to these individuals may be prominent.

3. *Catatonic Type.*—These cases show prominence of negativistic reactions or various peculiarities of conduct with phases of stupor or excitement, the latter characterized often by impulsive or stereotyped behavior and usually hallucinations. It is found retrospectively that in the stupor the sensorium has remained clear.

4. *Paranoid Type.*—These cases are characterized by prominence of delusions, particularly ideas of persecution or grandeur and frequently with a consistent emotional reaction of aggressiveness due to persecution. There may be hallucinations in various fields to which the patients react at first consistently, but later, as deterioration occurs, apathy or indifference may make an appearance. A predominately homosexual component or fixation at this level of development appears prominent in this group of cases, whereas the previous groups show evidence frequently of not having reached this level or of having regressed to more infantile levels of psychosexuality.

5. *Other Types.*—Occasionally other types of reactions of dementia praecox may be met with.

It has been my experience that there is little justification for a subtype entitled "Simple Type." It will be remembered that in the previously mentioned group of 1,000 Navy patients, only 2 patients were diagnosed dementia praecox, simple type, and I am fairly sure of the incorrectness of the diagnosis in both instances. One of these patients showed full recovery and 1 marked improvement, which, by the above description, precludes the diagnosis of simple dementia praecox. It is my opinion that many patients diagnosed simple dementia praecox in various hospitals will reveal obvious hallucinations and delusions if a careful enough examination is made. It may be that this diagnosis is more justified for a type of young adult who is not usually hospitalized, but who generally loses his interest and zest for life and gradually develops general unconcern and apathy, with a comparative additional loss of efficiency in his work, which over the long stretch leads to a gradual lowering of the type of work accomplished and may even lead to total dependence on the family.

As previously described, the hebephrenic type of schizophrenia is mainly characterized by silliness, bizarre behavior, and strangely distorted psychotic content. A common phenomenon is that of obvious dissociation between mood and content of thought. This inappropriateness is probably one of the primary symptoms which, to the newcomers in psychiatry, make this condition seem so far removed from normal behavior but so difficult to interpret. The patient's responses to his inner thoughts and emotions are so difficult to evaluate that the importance of their meaning is sometimes lost through the examiner's attention wandering to the patient's peculiar behavior. There is also some tendency on the part of young psychiatrists to feel a sense of frustration in dealing with these patients, with the result that they feel more comfortable and therefore spend more time with other patients with whom rapport is more easily established. There is also some indication that the term hebephrenia implies poor prognosis and chronicity, and there is some evidence to support such view. We should be extremely careful not to cultivate such conclusions, else we shall miss the hebephrenic patient who still has a chance to recover with psychiatric help. Our present knowledge concerning the prognosis of these conditions is not yet conclusive, and certainly every hebephrenic is entitled to the chance that our assistance may be beneficial. There is also some tendency today to consider hebephrenia as the end result of other schizophrenic processes, and in this sense it is considered the end of the road for patients formerly classified in one of the other subtypes. If the patient with catatonic, paranoid or simple schizophrenia does not improve through the succeeding years, the symptoms considered fairly specific for these subgroups often gradually shift to symptoms of hebephrenia. If you have occasion to collect several of these chronic patients and place them in a room together, even their general appearance will be quite similar. Facial expressions seem rather vacuous, little attention is given to the environment, each one may show similar manneristic behavior, and all of them may be responding in an apathetic, indifferent sort of way to auditory hallucinations. Mental hospital haircuts and hospital type clothes tend to make the similarity complete. Identification of these patients by name is often difficult for ward attendants and nurses for these reasons. Nevertheless, as psychiatrists we can learn much from our examinations and study of such chronic patients, for we are seeing the end results of years of usage of psychologic mechanisms with the production of substitutive behavior, which at the same time is not socially acceptable. We are almost forced to conclude that the constant use or overuse of such mechanisms as regression and projection, which originally began in response to the need for justification of self or withdrawal from anxiety-producing situations, has taken its toll through the years, so that now the personality bank is empty. In the young adult who shows typical hebephrenic disorganization, silliness and bizarrity of content without any acute expression of acute emotional conflict, but who also shows acute mental excitement, we sometimes see remission of such symptoms for varying periods of time even up to several years. We must therefore be careful in estimating prognosis in these cases, especially if this is the patient's first episode. There will be some difficulty in differentiating these cases from acute catatonic excitements, but the latter will usually show sudden shifting of affect (which at times is very explosive in character) and sudden shifts in motility, and there is more evidence of underlying acute emotional conflict. This situation is sometimes more positively shown through the administration of temporary narcosis with sodium amytal or sodium pentothal.

There are many reasons why the catatonic form of schizophrenia is the most interesting subtype. Its greater variability from stupor to extreme motor restlessness, the feeling that these responses are nearer allied to the normal than are the hebephrenic responses, the interesting and sudden change from extreme thought confusion to normal clarity, and the proven better prognosis in catatonia make this one of the most interesting of the psychoses. In another report[3] I have outlined some of the indications, technics and results in such cases from the intravenous use of sodium amytal. It has been my experience that a large percentage of patients in a stuporous reaction show good temporary response to this therapeutic approach. During the resulting clear, rational period the psychiatrist has a chance to gain understanding of the patient's subjective state and to evaluate the dynamisms involved in the illness; and, further, through the mechanisms of catharsis, reassurance, suggestion and imparting of clear information important to the patient, he will have made definite progress in psychotherapy. It is very doubtful that there is any curative effect of the drug alone, but through its effect on the brain centers the patient becomes more suggestible and uninhibited, and the process of catharsis is made possible. The administration of the drug without the personal attention of the therapist is worthless. Most such catatonic patients will pour forth a wealth of delusions and hallucinations during such cathartic period, will often quite spontaneously outline the conflict situation, and in relaying their personal difficulties will freely voice feelings of guilt and constant thoughts that they will be tortured and even killed because they are "yellow" or cowardly. Appropriate emotional expression, such as sobbing and tearfulness, is often present. If the patient shows gradual improvement from his stuporous state, the acute conflict seems to diminish, and the patient, through further recession of symptoms, proceeds to social recovery. In certain cases, however, such improvement does not occur, and through succeeding years the patient gradually loses all evidences of emotional distress, even though the same general type of psychotic content continues, and in such end state the condition resembles hebephrenia as mentioned above. We do not yet know why one catatonic patient recovers and another does not. One important point in evaluation of prognosis here would be the integration of personality of the patient prior to the onset of mental illness. It seems reasonable to assume that the better the personality integration, the less vulnerable such individual will be to any sort of mental illness. But this is not yet completely proven. Similarly, one would be inclined to believe that a patient who has had one mental illness would be more liable to another episode than a patient who has not been mentally ill. In a recent study of 100 officer-patients this factor was negligible, and in another study of 1,000 cases there was a very slightly better recovery rate in those patients who had suffered no previous illness.

In some ways the patient with paranoid schizophrenia is the most difficult to treat. His outstanding aggressiveness and paranoid projections are often very irritating. Our patience becomes short, and when the patient sees such response he will often bring this reaction into his own paranoid attitude and expression. It becomes increasingly important, therefore, that every precaution and care be taken by the psychiatrist in his first interview with such patient, for it is here that the ultimate good or bad patient-physician relationship will be decided. If the physician can remain neutral yet sympathetic, can elicit information without appearing too inquisitive, can listen and give complete attention to the patient without seeming too observant, can so phrase his questions that he does not appear to be taking sides, and if he can remain calm and placid in the face of possible loud harangues and pounding of fists on the table, he may then consider that he has finished a successful interview with a paranoid patient. These technics are not learned from books but must be developed slowly and carefully with the guiding help of an experienced psychiatrist over extended periods of time. One cannot consider himself an accomplished interviewer unless he can master such situations most of the time. In our therapeutic approach to the patient with paranoid schizophrenia we often attempt, through an appeal to his sense of fair play, to get him to admit that while his conclusions as expressed in his paranoid delusional material may seem reasonable to him, it also is reasonable to consider the conclusions on the same factual material which may be reached by the psychiatrist. If this is successful, we may then hope to take the patient one step further, and, through the tool of his confidence in the physician, he may then reach the decision that his previous conclusions were incorrect and the conclusions of the therapist proper. With this approach we are using the mechanism of transference to foster the building of a broader tolerance within the patient, and this means increased tolerance to himself as well as to others. In this way the conflict situation may be eased to such extent that the paranoid symptoms will subside and the patient possibly regain mental health. Next to catatonia, paranoid schizophrenia shows the best prognosis. Its symptoms seem more specifically channelized, and therefore the diagnosis is somewhat more easily established. Such patients with paranoid schizophrenia who do not recover will continue to express paranoid content with fairly good personality preservation for many years, but eventually a certain percentage of such patients tend to develop symptoms of hebephrenia.

There are certain patients who exhibit typical signs of admixture of symptoms of two of the subgroups of schizophrenia. In such cases the diagnosis of mixed schizophrenia is used. Whenever symptoms are such that no clear subgroup differentiation can be made, the term "undifferentiated type" is utilized. It is our custom at St. Elizabeths Hospital to use these two groupings fairly frequently, especially in early acute

(*Continued on page 133*)

MYELOID REACTION IN ACUTE TUBERCULOSIS*

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Washington

A case we observed recently was diagnosed clinically as myelogenous leukemia. Gross autopsy findings allowed us to repeat this diagnosis. However, the histopathologic studies showed a striking absence of leukemic cellular infiltration, which led us to consider the possibility of a leukemoid reaction concomitant with an extensive lymphogenous tuberculosis located mainly in the abdominal lymphoid tissue. An unusual collection of hypersensitivity manifestations, present also, was illustrated by a marked endarteritis in the kidney and heart, "Masson bodies" in the lung alveoli, and eosinophilic infiltration in all lesions observed.

Report of Case

A 22-year-old colored male was admitted to the hospital on March 9, 1946. The chief complaint was a "cold" for 2 weeks with productive cough for 1 week. One week before entry there was onset of left lower chest pain more marked with respiration and more severe in the 2 days before admission. This was accompanied by a change in the sputum to a rusty mucopurulent character. There was intermittent fever for the past week with sweating but no chills. There had never been evidence of hemorrhagic diathesis. He lost 10 pounds in weight during the 2 weeks prior to admission. Three months before admission he had had "burning" in the epigastrium with nocturnal vomiting. There had been nocturnal frequency of urination (4 times) for the past 2 months.

The pulse rate was 114 per minute, the temperature 101° F., the respiratory rate 36 per minute, and the blood pressure 145/85. Ophthalmoscopic examination revealed white exudates and linear hemorrhages in the outer quadrant in direct relation to arterioles on the right and small hemorrhagic areas and small exudates in the upper part of the left fundus. The heart was not enlarged, and its rhythm was regular. There was a slight systolic murmur at the apex. On percussion of the chest no abnormalities were found. Auscultation revealed fine crepitant râles over the upper half of both lung fields anteriorly and posteriorly. There was decreased tactile fremitus bilaterally. The liver was palpated 11 cm. below the right costal margin and was smooth and tender. The spleen extended 6 cm. below the left costal margin. There was some local tenderness over both upper abdominal quadrants. The neurologic examination was negative. On admission the patient had been treated with penicillin, 15,000 units intramuscularly every 3 hours, for supposed coëxistent pneumonia. The patient remained febrile. Two days after admission the spleen was palpated 8 cm. below the left costal margin and the liver 18 cm. below the right costal margin. A slight pretibial edema developed 6 days after admission, at which time a split mitral second sound and cardiomegaly were observed. The patient became dyspneic and orthopneic, and the neck veins became distended. The venous pressure was found to be 260 mm. of water. An electrocardiogram showed right axis deviation and apparent diffuse myocardial disease. He was digitalized with whole leaf in 24 hours. Seven days after admission the liver was found to be 15 cm. and the spleen 5 cm. below the costal margin. Bronchial breathing was heard over the left and right lower and mid-lung fields posteriorly. There was no external lymphadenopathy. The urine 2 days after admission was amber, had a specific gravity of 1.015, showed 2 plus albumin, no sugar, and 2 to 5 white blood cells per high power field. The sputum was concentrated 3 times and found negative for tubercle bacilli. A positive Mantoux text was obtained. A blood total protein was 5.8 grams and the urea nitrogen 9 mg. per 100 c.c. of blood. Irradiation of the spleen was begun on March 22. The patient pursued a downhill course and died March 28, 1946.

The blood count was as follows:

March 11, 1946

Hgb.	73	per cent
RBC	3.7	millions
WBC	865,000	

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† Formerly Assistant Professor of Pathology, University of Arkansas School of Medicine.

Differential (per cent)	
Polymorphonuclears	59
Bands	10
Myelocytes	23
Basophiles	3
Lymphocytes	1
Monocytes	2
Eosinophiles	2

March 12, 1946	
Hgb	10.5 Gm.
RBC	4.34 millions
WBC	725,000
Differential (per cent)	
Polymorphonuclears	56
Bands	6
Young forms	13
Myelocytes	12
Premyelocytes	5.5
Myeloblasts	2.5
Lymphocytes	4
Monocytes	0.5
Eosinophiles	0.5

March 22, 1946	
WBC	537,000

March 26, 1946	
WBC	420,000

A marrow biopsy was diagnosed as myelogenous leukemia, showing considerable myeloid hyperplasia, with large numbers of immature forms. All varieties of leukocytes and myelocytes were present. Occasionally a group of nongranular myeloblasts was seen. An increase in megakaryocytes was not observed. Nucleated red blood cells were relatively increased but gave place to the wildly proliferated myelogenous elements.

The clinical diagnosis suggested was myelogenous leukemia with infiltration into pulmonary, cardiac, and renal tissues; terminal bronchopneumonia.

At necropsy a slight pitting edema was found over both legs. Two firm, movable, pea-sized lymph nodes were palpated in the left anterior triangle of the neck. There was about 200 c.c. of a cloudy fluid in the peritoneal cavity. The liver was 4 cm. below the right costal margin and the spleen 3 cm. below the left costal margin. The para-aortic and mesenteric lymph nodes were about bean-size and on section were greyish-yellow and friable but of somewhat firmer and more compact consistency than cottage cheese. One parapancreatic node was about walnut-size and yellowish and lobular but of similar consistency. There was no free fluid in either pleural cavity. Several hilar lymph nodes were enlarged to walnut-size and of the same appearance as the parapancreatic and other nodes. The right lung weighed 975 Gm. The left lung weighed 600 Gm. The lungs were mostly atelectatic but showed focal emphysema. In both, in their lower portions, were hemorrhagic infarcts. Pea-sized, somewhat raised, yellowish areas were scattered diffusely through both lungs. The heart weighed 430 Gm. Slight greyish streaking mottled the endocardium and epicardium. The right auricle and left auricle as well as the left ventricle were dilated. The cardiac valves showed no pathology. The coronary arteries were patent but had thick white prominent walls. The liver weighed 2,200 Gm., had rounded edges, and was firm. It showed greyish-yellow pin-head to pea-size mottling. There was some "nutmegging" on the cut surface. The spleen weighed 500 Gm.; its pulp was beefy red and firm. The trabeculae were prominent, and the germinal follicles were large and greyish-white. Each kidney weighed about 300 Gm., was pinkish-grey, and showed pale infarcts over their surfaces.

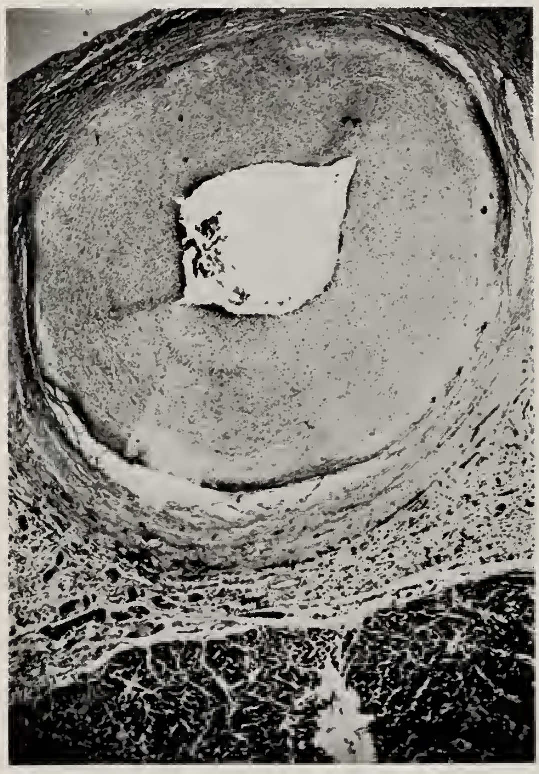

FIG. 1. Coronary artery showing arteritis with intimal proliferation. Reduced from a magnification of 35 times.

On histopathologic examination the heart showed vessels with endarteritis and distinct intimal proliferation (fig. 1). Foci of eosinophiles and lymphocytes were found around the smaller vessels. The myocardium had

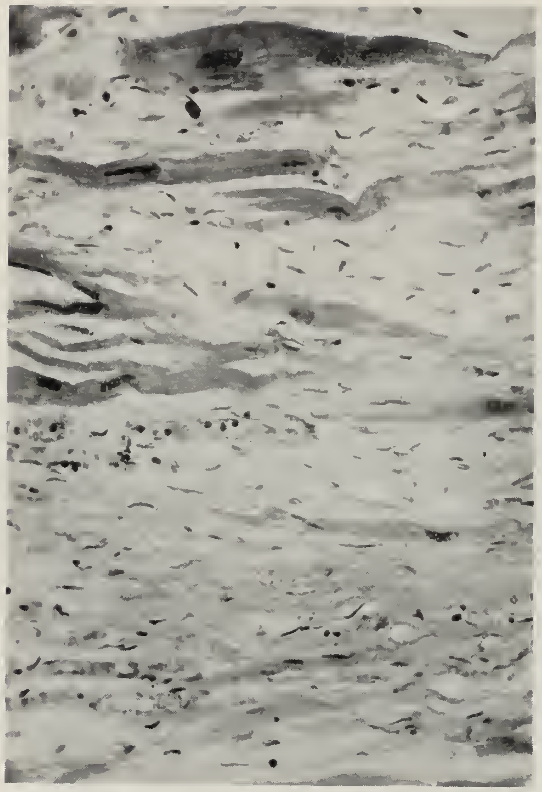

FIG. 2. Focal areas of collagenous degeneration in the myocardium. Reduced from a magnification of 300 times.

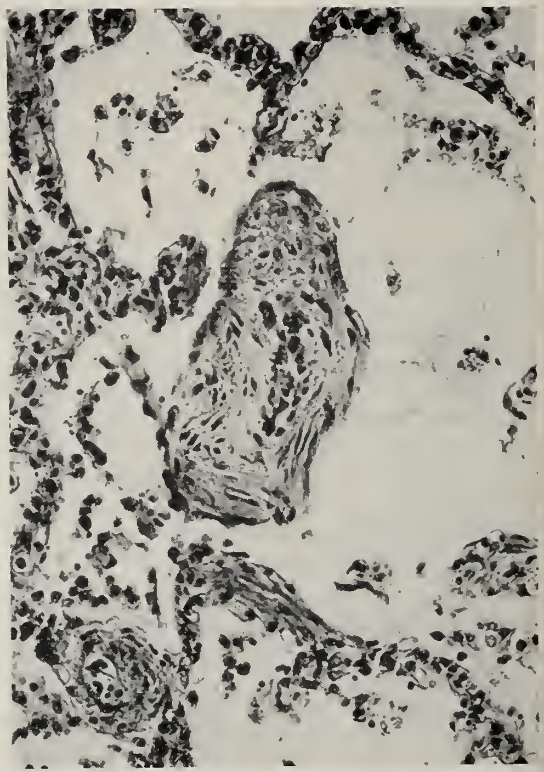

FIG. 3. "Masson body" in the lung. Reduced from a magnification of 415 times.

focal areas of fibrosis and collagenous degeneration (fig. 2). No infiltrative leukemic cells were found. The vasa vasorum of the involved vessels were dilated and showed considerable congestion. The endothelial lining of the coronary vessels was roughened and had parietal thrombi. The lungs had occasional foci of granuloma without giant cells, but with epithelioid cells and lymphocytes. There were many "Masson bodies" in the alveolar spaces (fig. 3). One area showed a pleuritis with increased height and number of the cells of the pleural lining as well as congestion subpleurally. Some of the alveolar capillaries showed small eosinophilic thrombi. No leukemic infiltration was seen. The lymph nodes, particularly the abdominal nodes, showed Langhan's giant cells, lymphocytes and epithelioid cells (fig. 4); caseation was present also, although not apparent in the illustrations. There were parapancreatic, para-aortic, mesenteric and hilar nodes with this characteristic granulomatous and necrotic reaction. Eosinophiles were distributed abundantly in these lymphoid tissues. Ziehl-Neelsen stains of the mesenteric nodes for acid-fast bacilli were positive. The kidneys showed many infarctions surrounded by inflammatory cells. Arterioles were seen which gave the same appearance as described in the heart, with many eosinophiles scattered here and there (fig. 5). The liver had considerable central necrosis and congestion. There was leukocytic infiltration into these necrotic areas, and an occasional myelocyte was seen. The portal fields contained lymphocytes and eosinophiles. The capsule of the spleen was thickened, and there was marked congestion of the pulp; eosinophiles were found dispersed throughout, but there was no leukemic infiltration. The adrenals showed some congestion and postmortem autolysis. The pancreas appeared the same but with slight periductal and intralobular fibrosis.

The pathologic-anatomic diagnosis was lymphogenous tuberculosis (involving the mesenteric, parapancreatic, para-aortic and thoracic lymphoid tissue), leukemoid marrow reaction, endarteritis of the coronary and renal arterioles, infarction of the kidney and lung parenchyma, allergic alveolar pneumonitis ("Masson bodies"), pleuritis, myocardial degeneration, congestion of the liver and spleen, and perisplenitis.

DISCUSSION

In retrospect, and at the time of the gross autopsy, we felt justified in saying "leukemia, probably myelogenous in view of the clinical laboratory findings." However, after studying the microscopic sections it was apparent that we had interpreted the case wrongly and that we were dealing with a very peculiar leukemoid reaction and hypersensitivity state concomitant with lymphogenous tuberculosis.

The problem of differentiating leukemia and leukemoid reactions clinically may be very difficult; the gross necropsy may also prove of little differential value. However, the histopathologic examination is usually decisive in delimiting the two by showing cellular infiltration into aberrant foci in leukemia but usually none in leukemoid reactions.[1] The minute features suggested to distinguish one from the other clinically commonly prove worthless when put into practice*. Such was the problem posed clinically and at necropsy by this patient, and it was not until the microscopic examinations were made that the diagnosis of leukemia became interrogated and doubted.

The presence of the three distinct but possibly associated clinico-pathologic features aforementioned led us to study the literature concerning such associations. Nowhere was another report found showing these features present in the same case. There have been reports of the association of tuberculosis and the leukemoid reaction[2, 3, 4, 5, 6, 7, 8] but none with the additional hypersensitivity manifestations. Feldman et al[3] demonstrated experimentally that tuberculin sensitivity can be the cause of leukemoid reactions. He and his co-workers as well as

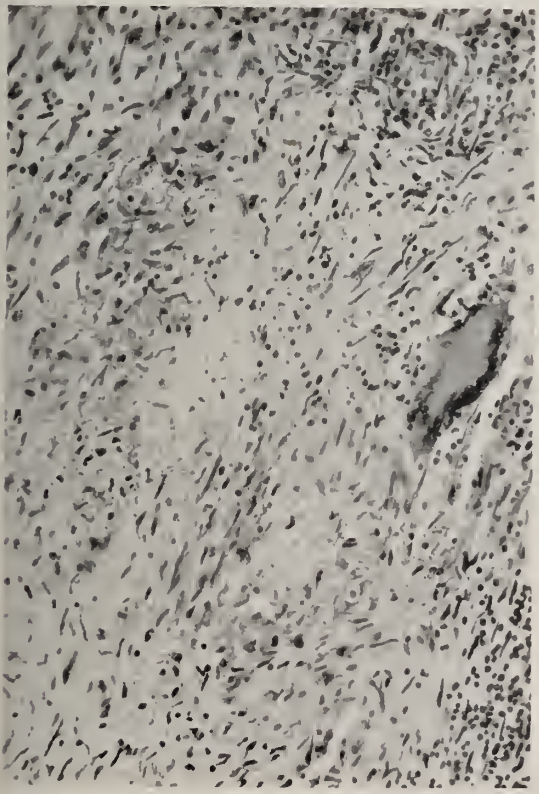

FIG. 4. Tuberculosis of a mesenteric lymph node. Reduced from a magnification of 300 times.

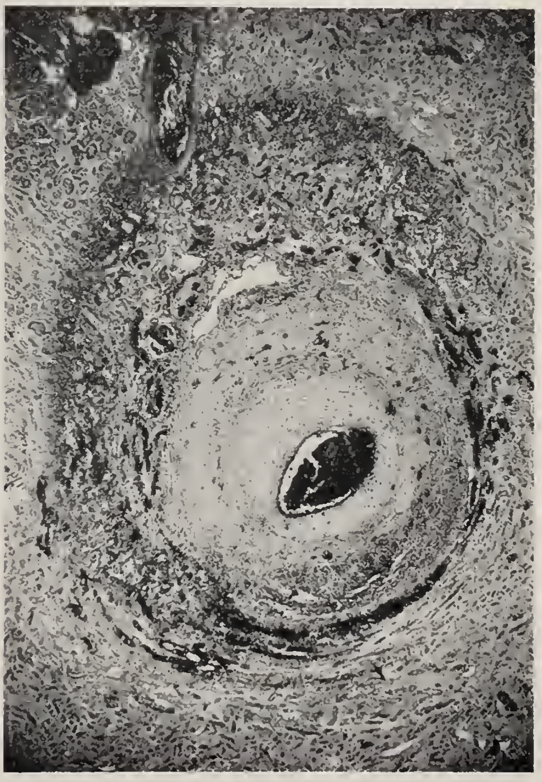

FIG. 5. Arcuate artery of kidney showing severe arteritis. Reduced from a magnification of 40 times.

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* Hill and Duncan[2] state that leukemoid cells are merely immature, whereas leukemic cells are immature and abnormal.

others[3, 4, 5, 6, 7] propose that tuberculin stimulates sensitized marrow to cellular proliferation causing immature cells to appear in the peripheral blood. Braun[4] found that many cases of tuberculosis associated with leukemoid reaction are of an abdominal type, usually lymphogenous or miliary.[4, 5, 6, 7]

The evidence submitted by Feldman,[3] the association of leukemoid reactions with abdominal lymphogenous tuberculosis[4, 5, 6, 7] and the distinct absence of leukemic infiltration leads to the probable conclusion that here is a case of leukemoid reaction caused by tuberculin sensitivity, and associated with additional hypersensitivity states.

Endarteritis was recently demonstrated by Clark and Kaplan[9] to have a close relationship to hypersensitivity reactions. By injection of foreign proteins into experimental animals they illustrated the development of subintimal proliferation, perivascular granulomas, fibrinoid degeneration, endothelial proliferation, and cellular infiltration—eosinophiles forming a common part of the picture—in the blood vessels. As the illustrations show, the lesions of the kidney and heart constitute a subintimal as well as endothelial proliferation characteristic of a severe endarteritis. The association of this pathologic state with other allergic tissue responses [10, 11] correlates well with the additional sensitivity reactions observed in this case.

"Masson bodies" were first considered as being specific in rheumatic pneumonitis. Herbut[12] disputed their specificity by finding them in other conditions such as bronchiectasis, pulmonary abscesses, and some pneumonias. Rich[13] has finally shown that "Masson bodies" are not specific for any disease but may be found in any condition associated with hypersensitivity. He also demonstrated experimental cases which showed an arteritis concomitant with the "Masson bodies," showing their close relationship to each other and to allergic reactions.

Eosinophiles are almost constantly observed in allergy. This need not always be mirrored in the peripheral blood but may be extensive in the involved tissues. Such it is here; many eosinophiles are seen in the pathologic tissues but there is an average number in the circulating blood. The presence of these cells further helps to indicate the allergic sensitivity in this case.

Besides the endarteritis and "Masson bodies" other hypersensitivity manifestations are revealed by the tissues. Hartley and Lushbaugh[14] have shown that focal necrosis of the liver may be produced by hypersensitivity and anaphylaxis to foreign agents. In this case there is central necrosis of the liver lobules probably related to passive congestion; however, allergic sensitivity may have played a role in its production.

Investigators[9, 10] have reported an interstitial myocarditis accompanying hypersensitivity reactions. The foci of degeneration in the myocardium in our case, in which eosinophiles are a prominent feature, may be associated with this form of allergic myocardial necrosis.

No other sensitizing agent which could be suspected of producing such manifest hypersensitivity reactions was known to be taken by the patient during his lifetime. Excluding the possibility of other allergens we suggest that the marked tuberculin allergy of this patient was responsible for most of the lesions.

Tuberculin allergy[15, 16, 17] is a cellular response, and, as such, little if any of the corresponding antibodies are found in the circulating blood. This probably accounts for our inability at present to distinguish specific immune agents in "bacterial hypersensitivity." Injection of tuberculin into tissues (skin) of sensitized persons results in local inflammatory hyperemia and necrosis, constitutional symptoms (malaise, etc.) in place of the initial tuberculous lesion, or any modification of these, depending on the intensity of the injected tuberculin and degree of sensitization. This type of hypersensitivity is not transferable and does not make smooth muscle spasmodic as does anaphylactic sensitivity. It seems that the "antibodies" responsible for "bacterial hypersensitivity" are intracellular and generalized in the respect that all tissues seem responsive to the allergic stimulus. A precipitated antigen-antibody complex is suspected of being the irritative agent responsible for the local inflammation and necrosis and distant tissue reactions on contacting the specific allergens. It is possible that cellular elements in the body also have gradients of degree of sensitivity, and those tissues most allergic react more readily and severely. Although this tissue gradient is not fully understood, certain cells react more often in allergic states than others, namely, the skin, vascular system, lungs, heart and liver. If a severe tuberculin hypersensitivity were to exist in a patient and the tissue threshold of response to the protein of the bacillus were low, it might be conjectured that, if tuberculosis developed in such a person so that the protein of the organisms were disseminated widely throughout the body, those tissues most reactive would react intensely and to an extent that demonstrable pathologic lesions would be evident. Even though proof is lacking we propose that the case here presented is one which shows the lesions above projected—severe endarteritis of the renal and myocardial blood vessels, allergic alveolar pneumonitis, myocardial necrosis, and leukemoid reaction. The fact that the patient was a Negro further supports the contention of his marked tuberculin allergy.[18] We concluded, therefore, that this case represented an unusual association of heretofore unreported hypersensitivity manifestations, leukemoid reaction and lymphogenous tuberculosis, the first two features being the result of tuberculin allergy.

Summary

A patient's clinical study and subsequent postmortem examination is presented that illustrates the association of an unusual array of pathologic findings, including lymphogenous tuberculosis located primarily in the abdominal lymphoid tissue, endarteritis of coronary and renal blood vessels, "Masson bodies" (allergic alveolar pneumonitis) in the lungs, and other tissue pathology related to hypersensitivity reactions. Clinically a blood leukocytosis with immature myeloid elements was found; however, leukemic infiltration was absent on the microscopic examination of portmortem tissues, thus indicating a leukemoid reaction.

A review of the literature concerning such associated pathologic changes was made and a brief summary of this presented in an attempt to demonstrate the validity of certain tissue reactions as being hypersensitivity manifestations. In addition, a suggestion is made as to the etiology of the variegated lesions, namely, a severe tuberculin allergy.

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President's Page

ORIENTATION LECTURES

The recent announcement that the Society's Membership Committee will sponsor so-called Orientation Lectures has brought many inquiries from members. What are they, and what is their purpose, they ask.

The lectures, first of their kind sponsored by the Society, have been designed especially to acquaint new members with some of the historical background of our organization, as well as its many activities. Medical ethics, medical malpractice, medical economics, and public relations will also be discussed by lecturers whose names will be announced in the next few weeks.

Lectures similar to those which the Society will present were originated by the Los Angeles County Medical Association about two years ago. Contrary to expectations, the lectures were enthusiastically received by a thousand applicants who now comprise approximately one fourth of the total membership of the Association. The success of this program attracted Nation-wide attention. Letters were received by the Association from many state and county medical societies throughout the country requesting details. The District Medical Society was one of the first to communicate with the Association and has had the program under consideration for some time.

Membership in our Society has increased by more than 300 in the past two years. In view of this increase and the large membership turnover since 1940, it was felt that steps should be taken to bring the newer members closer to the organization and to give them a better understanding of many matters of professional interest.

While it will be obligatory for new members—that is, those elected for one year who have not yet been confirmed by the Society—to attend the lectures, other interested members are cordially invited. Although the lectures will be published in the MEDICAL ANNALS, for the enlightenment of those who cannot attend, it will be impossible, for lack of space, to include the question-and-answer period. This may well be a most profitable part of the program.

An attempt has been made to select the most convenient hour for new members to attend these lectures. The Membership Committee has finally decided upon four successive Saturday mornings at 11:00 a.m. beginning with April 3. Ample notice will be given to everyone so that those wishing to attend can make plans to be present.

Raymond T. Holden

Editorials

A NATIONAL HEALTH PROGRAM*

Before I became Federal Security Administrator, six months ago, I was aware—distantly aware as a member of the public—of the controversy which was raging between the proponents and opponents of national health insurance. After I took office, I naturally made it my business to study the issue intensively.

I had many interviews with health officers in the Federal Security Agency. I talked with leaders of the American Medical Association, including several members of the District of Columbia Medical Society. Since there are probably more different types of medical care programs in operation in the District and nearby Maryland and Virginia than in any other part of the country, I had an unusual opportunity to see how some of the much-discussed theories worked out in actual practice. I could see research going forward under Federal sponsorship at the National Institute of Health and under private sponsorship at our universities and private hospitals. I could examine the comprehensive insurance program of the Group Health Association and the limited insurance program of the Blue Cross in terms of their value to our own Government employees. I could study hospitals, clinics, and other health services operated as Federal, as municipal, and as private services.

These observations deepened my conviction about the need for national health insurance, but at the same time they have convinced me that conflicting views on this issue need not and must not interfere with coöperation between Government and organized medicine on other aspects of the health program which are noncontroversial. We have no right to allow our fight over national health insurance to interfere with our working together on medical projects which we all agree should be undertaken.

The coöperative effort of organized medicine and the Federal Security Agency in seeking a remedy for the serious shortage of hospitals and health facilities is already bearing fruit. It resulted in the passage of the Hospital Survey and Construction Act which, in turn, led to a survey of need by all the states. The Federal Security Agency is now allocating Federal funds to help build the hospitals which the surveys showed were most needed. By 1952, the Nation should have more than a billion dollars of new hospital construction.

Research is another area in which organized medicine and the Federal Government have worked together effectively and in which they must continue to work together. Federal aid for medical research has been steadily expanded. In the District of Columbia alone, during the current fiscal year, almost $400,000 has been allocated to 16 institutions. These grants finance varied projects: for example, studies of benign and malignant bone tumors by Dr. Charles F. Geschickter of Georgetown University; research in antibiotics from fungi and higher plants by Dr. Monroe J. Romansky of George Washington University; and a study of streptomycin in diarrhea by Dr. Frederick G. Burke at Children's Hospital.

Interest in furnishing the medical men of this country with every possible research aid is shared by both the legislative and executive branches of the Federal Government. Congress has made generous appropriations for research and will soon consider a bill to establish a

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* This is the twenty-third in a series of guest editorials by distinguished physicians and laymen.

National Science Foundation which would coördinate and intensify the Nation's total research effort. The President appointed a Scientific Research Board which has not only studied the Nation's existing resources for research but has also proposed a program which would produce a three-fold expansion of medical research by 1957.

No one today can even predict the possibilities of medical research. There should be more research into the causes and cures of every ill which human flesh is heir to. Some can be practically eradicated while others can be far more effectively controlled than at present. Furthermore, our over-all research programs should be more balanced than they are today. Cardiovascular diseases are our number one killer—they kill three and one-half times as many people as cancer—and yet ten times as much is spent for cancer research as for cardiovascular research. Certainly, organized medicine and Government can coöperate in the field of medical research.

There are many other areas that call for coöperative action—the expansion and strengthening of medical schools, the development of more adequate health services in local communities, the removal of health hazards caused by stream pollution and poor sanitation facilities, to mention only a few.

As Federal Security Administrator, responsible for all Federal activities in the fields of health, education, and welfare, I want to do everything I can to smooth the path of the private practitioner. I consider it my business to see that Governmental powers are used always to aid and never to hamper his activities. And I will only be satisfied with my work when we have attained the best possible health for the last 140 millionth person in this great country.

I pledge my coöperation and I ask for the coöperation of the medical profession. Let us give the American public a new kind of health battle to read about—a fight in which Government and organized medicine by a united attack win major victories against the common enemy, disease.

Oscar R. Ewing
Federal Security Administrator

I. EDUCATION IN THE HOSPITAL

A modern hospital has two major functions. The obvious first one is for the care of patients. It should offer the physician the best possible facilities for treating his patients. Hardly less important than this is the great need for establishing a strong feeling for the educational requirements in the hospital. This is the key to the future of medicine in this country.

Since education has a major importance in the hospital, it is one of the fundamental responsibilities of the governing board of the institution. The broad aspects of education in the sense here considered extend far beyond the simple teaching of internes or nurses. Almost every act in the treatment of a patient in a hospital should have a teaching connotation for the professional staff of the institution. This meaning must be clarified on the adjunct services manned by people who are not strictly professional but whose activities must mesh with those of the doctors and nurses. For this reason every hospital, no matter how small, can accomplish something in an educational way in its community.

Even the patient should have an educational experience in his hospitalization. His care is not confined to medical and nursing attention. The form of his admission, the attitude of everyone in the hospital to him and his visitors, the care of his room, and finally the mechanism of his discharge are all matters of great importance. As such they are properly included in the medical program of education.

Since the primary purpose of a hospital is to furnish a place to treat patients—a place where the doctor can work, the primary obligation in education is to train the young physicians who work there. The education of the interne is not confined to doctor-patient relationship. The relation between the hospital as an institution and the doctor is an essential corollary. The young doctor must grow up with undistorted ideas of the interrelationship of all these groups. Only thus will he take his place properly as a contributing member of the visiting medical staff. The entire professional staff from student internes to chiefs of service must be acquainted with the multiplicity of problems from engine room to solarium for best institutional functioning.

The resident training portion of the educational program in most instances can be materially aided by a working relationship with a medical school. One of the needs in Washington is to maintain and extend, by community planning, the medical school liaison with hospitals. In the modern set-up, where professional education in the universities is being handled largely by full-time men, the community contacts which the medical student will receive in private hospitals will be an advantage to him and to those primarily responsible for his instruction. The teaching of medicine should involve not only the use of indigent or charity patients but patients from all walks of life, because the future practice of medicine will involve such a variety of patients.

It is now well established that the economic background of a patient often figures largely in the medical problem which sends him to the hospital. It is true that a student who sees only one stratum of the social levels will develop a narrow concept. The indigent patient in the hospital should be supported by government funds, organized charity funds, or endowment funds set aside for this specific purpose. Thus all patients in the hospital should be classified as full pay. No bills should be charged off against the bills of well-to-do patients, nor should indigent patient bills be listed as bad debts.

The instrument for carrying out an educational program must be the medical staff of the hospital. The fundamental organizational problem in this regard is that those charged with the direction of the educational program be enthusiastically concerned with its effectiveness. In order that the governing board may fulfill its obligation to set up and maintain a program in the hospital, it is desirable, if not essential, that active, energetic physicians be members of the governing board. This is not so important from the needs of the board for the advice that these men can offer, as from the needs of the medical staff itself to understand and appreciate the administrative needs of the institution. It must be realized, however, that no lay board can be competent to make unaided all of the decisions of borderline professional import. The physicians of the institution, whose interest should be deeply personal, need only to be taught the administrative problems to offer real help in their solution by the board. Physicians who occupy such positions in determining or executing the policies of the hospital, including its financial affairs, become qualified to steer its course, which of late has become so hazardous.

It is only by the hospital assuming a larger role in the general education of their entire personnel that the problems which now confront this essential institution in the medical field may be met. The greatest immediate incentive to the widespread improvement of educational programs is the general difficulty of obtaining adequate numbers of internes and nurses. The competent beginners in both fields are naturally going where they think they can learn the most. This is the challenge to every hospital today.

C. S. W.

D. S.

1948—AND THE BOARD OF TRUSTEES, AMA

Examination of the operations of the American Medical Association reveals that the Board of Trustees is the key to its policies, their interpretation, and their implementation or modification.

The Board should, and does, afford leadership to the House of Delegates and to the profession at large, but the kind of leadership furnished and the kind of attitude given by the Board to important problems will be determined by the kind of individual trustees the House of Delegates may elect.

Observation of the House of Delegates in action might lead one to wonder how many of the delegates really had an understanding of the serious questions upon which they must vote in setting the policy of the AMA. If such a doubt should arise, the doubter would wonder how such a delegate or delegates got there in the first place. Actually the delegates are elected by the state medical societies for two-year terms—and sometimes it looks as if the state societies don't think their selection a very important matter.

At any rate, these delegates elect the Board of Trustees.

On four previous occasions MEDICAL ANNALS has commented upon these matters.[1] These articles made some observations about age and presented analytical tables thereon.

There is presented herewith an age analysis table limited to the Board of Trustees of the AMA over the past five years.

The Constitution provides that no trustee shall serve for more than two consecutive terms, and trustees are elected for terms of five years (except in filling unexpired terms). Thus trustees may—and often do—serve for ten years, and the Board could become literally "nine old men"!

This year two trustees, ages 70 and 71, are ineligible for reëlection, and the elder of these has recently been announced[2] as a representative of the AMA to the new Pharmaceutic-Medical Research Foundation!

It may be further noted that in the last four years two trustees have died in office, one in this fiscal year; this office (filled ad interim by the Board of Trustees) will be up for election of a trustee for the balance of the unexpired term.

The coming election, therefore, of three out of nine trustees will afford a golden opportunity for the delegates to elect progressive, forward-looking trustees.

(Would utter chaos and confusion result if the rules were to be amended making ineligible

TABLE 1

Age of Trustees AMA, 1943–1948, by Fiscal Year

(Source of Ages—AMA Directory, 1942 Edition)

NAME	1943–44 (1944 BIRTHDAY)	1944–45 (1945 BIRTHDAY)	1945–46 (1946 BIRTHDAY)	1946–47 (1947 BIRTHDAY)	1947–48 (1948 BIRTHDAY)
Irons, Ernest E.	67	68	69	70	71
Braasch, Wm. F.	66	67	68	69	70
Lee, Roger I.	63	—	—	—	—
Henderson, Elmer L.	59	60	61	62	63
Fenton, Ralph A.	64	65	—	—	—
Bloss, James R.	63	64	—	—	—
Roberts, Charles W.	61	62	63	64	65*
Johnson, Wingate M.	—	—	—	—	63†
Sensenich, Roscoe L.	62	63	64	65	—
Pallette, Edward M.	70	71‡	—	—	—
Peers, Robert A.	—	70§	—	—	—
Bauer, Louis H.	—	57	58	59	60
Fitzgibbon, J. H.	—	—	52	53	54
Miller, J. R.	—	—	60	61	62
Murray, Dwight H.	—	—	58	59	60
McCormick, E. J.	—	—	—	—	57
Average age of Board end of fiscal year	64.0	64.0	61.4	62.4	62.4

* Died in office, July 28, 1947.

† Elected ad interim by Board of Trustees to place held by Dr. Roberts (September, 1947).

‡ Died in office, November 15, 1944.

§ Elected ad interim by Board of Trustees to place held by Dr. Pallette (February, 1945).

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[1] Editorials: M. Ann. District of Columbia, 1944, **13**, 344; 1945, **14**, 414; 1946, **15**, 29 and 608.

[2] Editorial: J.A.M.A., 1948, **136**, 42.

for election or reëlection as trustee any physician who had reached his 61st birthday? Such a rule would insure retirement from the Board at the maximum age of 65.)

What qualifications would one look for in a trustee? And what should be controlling factors in the vote of a delegate?

Honesty and sincerity should be essential but stupid people may be honest and sincere: personal popularity may be a neutral qualification. "Running with the gang" could easily be a disqualification. Extremists, either reactionary or radical, could scarcely qualify.

Long familiarity with the affairs of the Association need not be an important qualification for election to the Board of Trustees. Indeed, there may be reason to believe that the introduction of fresh viewpoints might do much to rejuvenate and animate its deliberations.

Essential qualifications without which no one should gain consideration are: an alert mind; a broad grasp of fundamental problems related to science and medicine and to economic and social relationships; a mental attitude young enough to accept change and participate in shaping it; and an independent and progressive approach to our times.

The problem of electing a trustee transcends provincial considerations. A trustee is a national officer. His opportunities and responsibilities are so great that they demand his freedom from personal influences. A constructive and not a defensive program is called for. "Constructive action" is not constructive when its movements are so snail-like that by the time accomplishment is reached the considerations upon which it was formulated have already long been "old hat"!

The councils of state medical societies have this year the rare opportunity of instructing their delegates on their attitude in regard to these three elections to the Board of Trustees. It is not always apparent that delegates in their activities conform to the progressive attitude of the state societies which send them. This opportunity of these councils is, in fact, an obligation resting upon them. Unless they discharge this duty they have no ground to stand upon if they say "The AMA does not fairly represent us."

In recent years several men of progressive mind have been members of the Board. Whether they are a majority is not clear. This election could make it clear.

H. P. R.

PRESENT STATUS OF ANTICOAGULANT THERAPY

The therapeutic value of the anticoagulants has been the subject of editorials in the ANNALS on two other occasions.[1, 2] In 1939 consideration was given mainly to the use of heparin in conjunction with the sulfonamides for the treatment of subacute bacterial endocarditis. In 1942 it was pointed out that this use for anticoagulant therapy was falling into disrepute, and in the succeeding years there has been little or no modification of this appraisal. At that time attention was called especially to the favorable results with heparin in the prevention and treatment of venous thromboembolic disease, and it was noted that a new anticoagulant, then called dicoumarin compound, was ready for evaluation. The experience with anticoagulant therapy during the past 5 years justifies this reconsideration of the topic.

Heparin and dicumarol are still the only drugs employed clinically for their anticoagulant effect. Neither drug is ideal, according to the requisites prescribed by Allen,[3] and in practice they are often used together, because, in a sense, they

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[1] Editorial: M. Ann. District of Columbia, 1939, 8, 370.

[2] Editorial: Ibid., 1942, 11, 446.

[3] Allen, E. V.: J.A.M.A., 1947, 134, 323.

are complementary. Some of the important characteristics of these drugs are shown in table 1, with italicization of those features which are disadvantageous.

TABLE 1

Chief Characteristics of the Anticoagulants

	HEPARIN	DICUMAROL
Mode of action	Antiprothrombin and antithrombin	Antiprothrombin
Administration	*Parenteral*	By mouth
Control of dose	Coagulation time	*Prothrombin value*
Initial response	Immediate	*24–72 hours*
Duration of effect	1–4 hours	*Several days*
Toxic effect	*Spontaneous hemorrhage*	*Spontaneous hemorrhage*
Control of toxic effect	Easy	*Relatively difficult*
Cost of drug	*High*	Low

Although other technics of administration are possible, the popular method for giving heparin is by intravenous injections at intervals of 4 hours. The usual dose is 50 mg., and in spite of the fact that the anticoagulant effect is inconstant, the clinical results are satisfactory.[3] Moreover, this dose almost never provokes spontaneous hemorrhage, so that frequent estimations of the coagulation time can be omitted. Heparin is used whenever an immediate anticoagulant action is desired. In this country the usual practice is to start the administration of dicumarol simultaneously, with the expectation that heparin will be stopped after several days and an anticoagulant effect maintained with dicumarol alone. It is in this sense that the drugs are complementary.

Dicumarol usually is given according to some such plan[3] as that of the Mayo Clinic (table 2). While this drug is being used, a daily estimation of the prothrombin value, expressed in percentage of normal, is mandatory. When heparin is also being given, blood for prothrombin estimation should be withdrawn at least 3 hours after a dose of heparin in order to avoid confusion from the antiprothrombin action of this drug. The optimum effect from dicumarol is believed by some to exist when the prothrombin value is between 10 and 30 per cent of normal.[3] Others[4] advocate higher values (50 to 60 per cent) as representing a satisfactory anticoagulant effect and being safer.

At present the conditions in which anticoagulant therapy is of established value or in which preliminary reports are very promising of good results are as follows:

1. Prevention of postoperative venous thrombosis
2. Treatment of venous thrombosis
3. Treatment of pulmonary embolism
4. Treatment of myocardial infarction
5. Treatment of acute occlusion of a peripheral artery.

TABLE 2

Plan for Administration of Dicumarol

First day	300 mg.
Second day	200 mg.
Each subsequent day that prothrombin value is:	
a. More than 20%	200 mg.
b. Less than 20%	None
Exceptions:	
1. Rapid decline in prothrombin value in 24 hours	None
2. Rapid rise in prothrombin value in 24 hours	100–200 mg.
3. Relatively "sensitive" blood, daily dose	100 mg.
4. Relatively "insensitive" blood, daily dose	300 mg.

There is little need to discuss the efficacy of heparin and dicumarol in the prevention of postoperative thromboembolic disease. They work almost perfectly. However, it is hardly practical to use them routinely in this connection, especially in view of the fact that postoperative venous thrombosis is relatively infrequent in the total experience. There is more justification for their administration in selected cases in which there is a particular predisposition to venous thrombosis, for example, following hysterectomy or in patients with a history of previous thromboembolism. Postoperative anticoagulant therapy customarily is continued until the time that the patient has been ambulatory for a few days. The anticoagulants should not be used when the risk of venous thrombosis is prolonged or when a patient faces a series of operations. Under such circumstances surgical ligation of the femoral veins is a more satisfactory prophylactic method.

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[4] Evans, J. A., and Dee, J. F.: New England J. Med., 1948, 238, 1.

The objectives in the treatment of venous thrombosis by means of anticoagulants are (1) prevention of pulmonary embolism, and (2) prevention of propagation of the thrombus, so that morbidity is diminished and the symptoms of the post-thrombotic syndrome are ameliorated. There is no question from the available reports that both are attained. The fact that anticoagulant therapy is so remarkably effective in preventing pulmonary embolism in cases of venous thrombosis is hard to understand unless cognizance is taken of Loewe's demonstration[5] that heparin has the power to cause solution of an early thrombus ("sludge" clot). There is no longer any possibility of debate regarding the relative merits of anticoagulant therapy and venous ligation for the prevention of pulmonary embolism. Both are wonderfully effective, both have their occasional failures. The exact place for each method in the problem of thromboembolic disease remains to be determined, although Homans' ideas[6] on this point are a valuable present-day guide and should be studied by all who are deeply interested in the problem. Where anticoagulants alone are used for venous thrombosis, treatment usually lasts 2 to 4 weeks and should be continued at least until the acute signs of venous thrombosis have subsided and the patient has been ambulatory for several days.

The administration of anticoagulants to patients with pulmonary embolism can be expected to accomplish two important results. First, the morbidity from the pulmonary disease is reduced, presumably because arborization thrombosis in the pulmonary arteries is prevented. Second, the chances of a subsequent episode of embolism are remarkably reduced. In spite of this second result, there is justification for Homans' view[7] that when pulmonary embolism has its origin from accessible veins, ligation is indicated, since a succeeding episode of embolism carries so much greater threat to life. Perhaps in this type of case, combination of surgical and anticoagulant therapy is more nearly ideal. The anticoagulants are used for about the same length of time as in the treatment of uncomplicated venous thrombosis.

The problem of anticoagulant therapy in coronary artery disease, particularly myocardial infarction, is presently the subject of an extensive investigation under the guidance of a special committee of the American Heart Association. The preliminary reports[8-12] on this type of treatment for myocardial infarction indicate that morbidity and mortality are considerably reduced and that the incidence of thromboembolic complications is sharply lowered (from upwards of 37 per cent to 4 per cent in one report). The usual period of treatment has been from 4 to 6 weeks.

Acute occlusion of a peripheral artery from thrombosis or embolism usually carries the threat of arborization thrombosis in arteries distal to the obstruction. This threat can be lessened by prompt use of measures to overcome arterial spasm, and reports[13, 14] to date suggest that anticoagulant therapy further improves the outlook for survival of the affected limb.

The contraindications to the use of heparin and dicumarol include deficiency of vitamins C or K, serious hepatic disease, renal insufficiency, blood dyscrasias accompanied by a bleeding tendency, surgery or trauma to the central nervous system, and ulcerative lesions of the gastrointestinal tract, and open wounds. When spontaneous hemorrhage results from the use of heparin, the effect of the drug can be removed by stopping administration and giving a transfusion of fresh blood. Because of the longer duration of action of dicumarol, hemorrhage resulting from its use is a graver problem. Besides withdrawing the drug, transfusions are given repeatedly and menadione bisulfite is injected intravenously in doses of 60 mg. 2 or 3 times a day.

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[5] Loewe, L.: Am. J. Med., 1947, **3**, 447.

[6] Homans, J.: Am. J. Med., 1947, **3**, 345.

[7] Homans, J.: New England J. Med., 1947, **236**, 196.

[8] Wright, I. S., and Foley, W. T.: Am. J. Med., 1947, **3**, 718.

[9] Peters, H. R., Guyther, J. R., and Brambel, C. E.: J.A.M.A., 1946, **130**, 398.

[10] Wright, I. S.: Am. Heart J., 1946, **32**, 20.

[11] Parker, R. L., and Barker, N. W.: Proc. Staff Meet., Mayo Clin., 1947, **22**, 185.

[12] Nichol, E. S.: Am. Heart J., 1947, **33**, 722.

[13] Allen, E. V.: J.A.M.A., 1947, **135**, 15.

[14] Allen, E. V., Hines, E. A., Kvale, W. F., and Barker, N. W.: Ann. Int. Med., 1947, **27**, 371.

In writing this progress report on the anticoagulants, the tone has been dogmatic for purposes of brevity. It is well, therefore, to conclude with the warning that much investigation remains to be accomplished before the place and value of these drugs can be fully appraised. Most of the studies reported to date are from large, well-organized centers where careful control of clinical investigation is routine. It is safe to predict that widespread use of anticoagulant therapy will have its discouraging aspects.

H. H. H.

In and Out of Focus

BY THE OBSERVER

Democracy in Action

It is safe to say that of the AMA's 133,000 members, a comparatively small minority have any knowledge of the Association's House of Delegates beyond the fact that it exists. Most of them, it can be assumed, are aware that their state medical societies are represented in the House. Perhaps a considerable number have read, in part at least, the proceedings of that body which are published in the *Journal* of the AMA. Others have undoubtedly been enlightened by their own delegates at annual meetings of their state societies or through the medium of their state medical journals. But the vast majority know little about its organization, how it functions, the attitude which pervades its membership, or the actions taken by it.

This is indeed regrettable, considering the fact that the House is the Association's policy-making body. But it is not too surprising to those familiar with medical organization affairs. The basic difficulty lies with the constituent state medical societies. With few exceptions, they encounter stubborn resistance among the rank-and-file of membership where non-scientific matters are concerned. It is proverbial that little interest can be aroused in meetings devoted to general organization affairs, especially when economic or social problems are under discussion. Indifference is also shown in the election of delegates to the AMA, although their responsibility for the welfare of the medical profession is greater than that of any other official chosen by a state medical society. For it is through their delegate or delegates that the constituent societies have a voice in the policies of the national organization. Here, if anywhere in organized medicine, one sees democracy in action. But, as those familiar with the House know, its conduct is not always democratic. This has at times been a source of irritation, if not concern, to those sincerely interested, in medicine's welfare. However, little has been or will be done about it unless more interest is shown by a larger proportion of AMA members than at present.

Your Observer has attended sessions of the House in his capacity as executive officer of a medical society since 1930. He has therefore had ample opportunity to familiarize himself with the structure of that body, the personalities which compose it, their reactions to certain situations and, to some extent, what they will do under given circumstances.

It is to be expected that the House reflects the times through which it passes and, of course, the state of mind of top AMA officials, who more or less guide it. Usually placidly agreeable to the suggestions of the latter, it has, on occasion, been unruly. But to date, at least, it has not gotten out of hand.

Your Observer recalls that in the early thirties leaders of the House, then in their middle years, were militantly isolationist in their attitude toward the laity. Medical affairs were none of the public's business. A majority were opposed to any change in medical practice. Some of the more oratorically inclined held forth frequently on the virtues of their profession. They were impatient of any "outside" interference, even to the extent of making it quite clear that they disliked the idea of laymen entering the medical field in any capacity. It was a holier-than-thou attitude which, happily, belongs pretty much to the past. By and large, the House is more liberal than it was a decade or two ago. It has always been efficient. Credit for this is no doubt due full-time AMA officials and "old hands" among the delegates, who see to it that it functions smoothly.

Regular sessions of the House have usually been open to anyone who cares to attend. Executive sessions are another matter. Periodically the House has barred everyone but its own members. Your Observer recalls that about 1934, for the first time in his experience, it placed restrictions on those who could attend executive sessions, but these were relaxed a year or two later.

Following the San Francisco session in 1945, persons other than delegates present at an executive session were said to have given information to the press. The next year at Atlantic City, the House, in a rather dark mood, voted to bar everyone but its members and officials of the AMA. Your Observer, in company with the President of the Society, was in attendance when this action was taken. They, of course, withdrew, as did all others who were not delegates. Non-members of the House were again excluded at the Interim Session of the AMA held at Cleveland in January of this year.

No one denies that delegates have a right to do what they please, but they seem to forget that the House is not an exclusive club. They are first of all representatives of their various state medical organizations. No secrecy should therefore surround their deliberations where their members are concerned. It is understandable why the press is excluded from executive sessions. But refusal to admit Fellows and members of the AMA, and officers of a state or county medical society, is another matter. Those who would justify the House's actions say that limiting those present at executive sessions to members of the House make it certain there will be no leaks to the press. The fact is that where more than two are present, there is no secrecy anyway. What happens now is that following executive sessions, members of the House immediately report the proceedings to the officers of their state or county medical societies who happen to be in attendance, which, incidentally, is the proper thing for them to do.

If members, generally, were aware that they are excluded from executive sessions of the House, your Observer suspects that there might be strong objections. They would undoubtedly insist that if the policy-making body of the AMA is as democratic as it claims to be, it would welcome them as spectators to all of its sessions. Such an attitude on the part of the House would be a most effective way of improving professional relations and inspiring confidence in its leadership.

Baruch on Medicine

Speaking at a dinner given by the Medical Society of the State of New York, the Coördinating Council of the five County Medical Societies of Greater New York and the Greater New York Hospital Association last November, Elder Statesman Bernard Baruch made his views known on the controversial compulsory health insurance issue. In a kindly, paternal manner, he took a middle course, undoubtedly hoping that it would be pleasing to both sides of the controversy. Judging by the reactions to his address, he succeeded fairly well.

"The need for more medical care exists," Mr. Baruch declared. ". . . there is no question this need will have to be met. The problem is how."

As his credo, he quoted the following from President Wilson's "The Road Away from Revolution": "'In these doubtful and anxious days when . . . the road ahead seems darkened by shadows which portend dangers of many kinds, it is only common prudence that we should look about us and attempt to assess the causes of distress and the most likely means of removing them.'

"That was Wilson's method—to assess portending dangers, and anticipate them by timely action," Mr. Baruch said, urging his listeners to "take that as your guiding star."

"In the matter of adequate medical care," Mr. Baruch continued, "too many doctors have been fighting a rear guard action for too long. I feel I must warn those doctors—time is running against them. The medical profession has justly earned great influence in the community. It can keep that hold only as it moves forward. It will lose that hold if it has nothing but objections to offer, if it has eyes only for what not to do.

"We must look for what can be done—and do it."

The "elements" which are essential to better health of the people, he said, are:

"More and better doctors—in more places.

"An immediate, complete survey to modernize medical education, with greater emphasis on chronic and degenerative diseases, mental hygiene, and preventive medicine.

"Reorganization of medical practice, stressing group medicine where needed and voluntary health insurance.

"For those who cannot afford voluntary insurance, some form of insurance, partly-financed by the Government, covering people in by law. I would call this 'compulsory health insurance,' if that term's proper meaning had not been lost."

Because of the controversial nature of the last two "elements," Mr. Baruch enlarged upon them. "Your organizations have been particularly active in pressing voluntary health insurance. You and others have proven group insurance to be a sound practical way. That is a great achievement. You can be mighty proud of it.

"But I would not be frank—nor friendly—if I did not add what you know. It is not good enough.

"It may be, as some have told me, that the needs of the bulk of our people can be met, given time, through voluntary insurance. What troubles me most are the needs of that sizable segment of society which does not earn enough to pay for voluntary insurance."

Mr. Baruch said that, in his opinion, "a form of compulsory health insurance for those who cannot pay for voluntary insurance can be devised, adequately safeguarded, without involving what has been termed 'socialized medicine.' The needs can be met—as in other fields—without the Government taking over medicine, or socializing it, something I would fiercely oppose."

"I do not fear Government taking its legitimate part in medicine, any more than I fear it in education or housing. I do oppose socialization here. It leads ultimately to the police state, degradation of the individual and lessened well-being. There should be just one Federal agency, with cabinet rank, for all health and human welfare problems. I do not like Government agencies to be like Mahomet's coffin, suspended between heaven and earth."

Exception will undoubtedly be taken by many physicians to Mr. Baruch's conception of socialized medicine. Government-sponsored compulsory health insurance and socialized medicine are synonymous in the minds of the majority of the medical profession. At any rate, Mr. Baruch spoke in a frank, friendly manner on a very controversial subject. He made constructive suggestions which deserve and should receive the thoughtful consideration of organized medicine.

★

Loyalty Test for Doctors

Although the ordinary U. S. citizen is a patient fellow, he is often vocal about things he doesn't like. Characteristic of him is an impatience with authority and a dislike of those whom he feels are arbitrarily imposing their wills on him. Paradoxically, he good-naturedly accepts Government restrictions if he is convinced they are essential to the country's welfare. He seldom aligns himself with minority groups who cry out against injustices—fancied or real. If he does, public officials are prompt to act. For he and his kind are the backbone of the Nation.

Significantly, there has been no outcry from ordinary citizens against the President's loyalty check on Government employees. They seem undisturbed by charges that their liberties are threatened. Where injustices exist, they are apparently confident they will be corrected. Loud lamentations, however, have emanated from the extremists on the right and left, and some who cannot be so considered. They vigorously protest the President's action as an infringement on the basic rights of citizens.

It is not surprising that the leftist Physicians' Forum has taken a hand in this matter. In a letter which appeared in the *New York Times* for December 26, 1947, Dr. Bernard C. Meyer, Chairman of the Forum's New York County Chapter, stated that at a meeting held by the New York County Medical Society, many of whom were also members of the Forum, they "endeavored to pass a resolution deploring the application of the President's loyalty test to doctors employed by the Federal Government." The resolution was defeated after an "acrimonious debate" by only ten votes.

According to Dr. Meyers, "The opposition of members of the Physicians' Forum to the application of the loyalty test to Federally-employed doctors does not arise from any want of patriotism or loyalty to the Government. The issue here concerns itself with the means of establishing loyalty and the criteria of loyalty itself. It is justifiably feared that the term lends itself to a looseness of definition and interpretation subject to the whim or prejudice of the user. There is good reason to suppose that today in many quarters it is taken to mean conformity: lacking any precision of definition the word becomes a slogan, a catch-all, the antithesis of that equally ill-defined concept—Un-American.

"The term 'disloyal' may consequently be applied to any groups of individuals, for instance, who, aware of some of the imperfections of American medicine, may wish to correct them. Proponents of compulsory health insurance are proclaimed as advocates of 'socialized medicine' (they have nothing to do with each other) and are promptly labeled Communist.

"Moreover, the very concept of subjecting individuals of a free nation to a test of loyalty is repugnant to the dignity and integrity of both American medicine and American citizenship. There is involved a combing and sifting of the personal and private life of the individual which is in itself alien to our history and our heritage. Science in general and medicine in particular can only suffer in a climate of espionage and suppression. The integrity and dignity of the physician is this sine qua non of his effective functioning both in the narrower medical sense and in his capacity to mobilize his fullest talents as a citizen.

"In some measure every public-minded citizen must be capable of experiencing dissatisfaction with the imperfections of our society. For the doctor this capacity combined with a concomitant urge toward change and betterment serves as the basis for progress in medical knowledge, research, and public health. Manifestly, if every expression of such dissatisfaction be construed as disloyalty, medicine is doomed and scientific thought throttled."

There are, of course, dangers inherent in loyalty checks. Certainly all of us deplore witch-hunting, whatever form it takes. But the alternative, in the minds of Dr. Meyers and those who think as he does, is apparently to sit by while those in positions of public trust who would jeopardize the Nation's welfare do their destructive work. These are perilous times and the country's safety is paramount. Taking steps consistent with our form of government to prevent subversive activity among Federal employees is therefore not only justified but a necessity.

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Health Economics in the Medical Schools

It is encouraging that more medical schools consider the social and economic aspects of disease worthy of inclusion in their curricula. The Committee on the Teaching of Preventive Medicine and Public Health reported recently that this subject is now being taught in at least 33 schools. One of these is the University of Colorado. In the November, 1947 number of the *Journal of the Association of American Medical Colleges*, Dr. Lloyd Florio, the University's Professor of Public Health and Laboratory Diagnosis, describes an elective ten-hour course in health economics offered by his school as inadequate. But he says sufficient experience has been gained to crystallize certain definite ideas.

"Medical students come to us very poorly prepared in certain important particulars," Dr. Florio observes. "They have had a great deal of biology and chemistry but little or nothing in the economic and social sciences. They lack a real consciousness of the social forces operating in our society today. The idea that medicine is also a social science is strange to them. It is interesting that many undergraduate colleges and universities are offering courses in the field of social medicine or including the subject, however inadequately covered, in other courses in economics, government and sociology. In our experience, very few premedical students have ever taken such a course.

"Our graduates leave the school with the knowledge of how to diagnose and treat disease in the individual, but not with the facts essential to diagnose and treat a sick and ailing society. To overcome such a handicap in one short course in medical school is impossible. This basic deficiency must be corrected during the premedical years. We can help our own cause, however, by considering the social as well as the scientific aspects of the subject matter of preventive medicine. We should not try to teach modern preventive medicine and public health without a discussion of the economic and social problems involved. For example: how many of us consider the many social, economic and political forces that are operative in adequate housing; or are we satisfied by a mere factual presentation that good health is related to good housing?

"The reasons are clear to all of us why preventive medicine should be taught in each of the four years of school. We do not suddenly expose an unprepared student body to the subject matter of health economics if we include the social, political and economic aspects of preventive medicine in our teaching. It will not be an isolated course, but one for which the students have been prepared carefully. The subject should be integrated into the fabric of every course we teach. Even though a separate presentation is necessary, its length will depend on how it has been dealt with in other courses the student has taken."

Dr. Florio speaks highly of a medical school course developed by Dr. Franz Goldmann of the Yale University School of Medicine, which he outlines as follows:

"1. Economic and social developments during the last decades and their bearing on medicine.
2. The supply of physicians' services.
3. The supply of hospital services.
4. The extent and costs of medical care.
5. Recent developments in organization of medical care.
6. Proposals actually under consideration."

These topics, Dr. Florio believes, should be preliminary to a more exhaustive study of various health schemes.

"This series," he says, "would be followed by a presentation of the development and operation of some of the foreign medical plans such as those in Germany, England, France, Denmark and in parts of Canada. Such a discussion is not to be undertaken with the idea that these plans are desirable or necessary for the United States. We have many lessons to learn from them and if we as physicians intend to talk about such plans in relation to our own problems, we should know something about them. Whenever the subject of medical economics is discussed, talk invariably turns to foreign medical plans, yet neither the students nor the doctors seem to have a clear understanding of them. We must trace for the student the background of how and why these plans were adopted, their advantages and disadvantages in terms of their own particular problem and what their own physicians, health workers and populace think of them. If one may judge, for instance, from what appears in the English medical journals, most doctors in the United States are sadly misinformed about how their English confreres feel toward their own medical insurance plan.

"I would conclude the course by inviting a group of available outside speakers to discuss various phases of health economics. As many points of view as possible should be included. With the previous background, the students can be more critical of what the speakers have to offer. Each medical school will have to work out a schedule for itself, depending on prevailing conditions and the available local talent. Most schools would have little difficulty in obtaining the services of someone competent to speak on the following subjects:

1. The Blue Cross, its aims, objectives and technics of operation.
2. How organized medicine plans to meet medical needs in our modern society. This would include a discussion of any local voluntary prepaid medical society plan.
3. Local medical plans operated by industry, cooperatives, the Farm Security Administration, etc.
4. The position of the labor unions in relation to the problems of medical care.

"The CIO and the AFL have speakers with a carefully worked out analysis of the problem. Medical students should be exposed to this point of view. It comes as somewhat of a surprise to many of them that these large unions, representing millions of people, believe that there is something wrong with the present economic aspects of medical practice.

"Each teacher responsible for the subject may also find in his particular community excellent talent on other phases of the problem. It must be made clear to all outside speakers that their opinions are not necessarily those of the instructor or of the school."

Too many of our medical schools have been indifferent toward this subject. It is to be hoped that more of them will recognize their obligation to provide objective and adequate courses on health economics.

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"... Circus Methods..." Inquiries received in the Society's office during recent weeks confirm the impression that every medical organization worthy of the name has, or is about to inaugurate, a public relations program. In fact, such programs are no longer endemic, they are epidemic. Medical groups everywhere seem to be vying with each other in the elaborateness of their plans to win public support. Surprisingly, many organizations which are usually conservative in their expenditures are comparatively free-handed when it comes to public relations.

Your Observer has previously questioned the investment made by some medical organizations in public relations programs. He doubts very much if they can be justified. It appears that others concur in this view. Last September Dr. Creighton Barker, the able Executive Secretary of the Connecticut State Medical Society, addressed the annual meeting of the Colorado State Medical Society on "The Purpose of State Medical Societies." In the course of his talk, Dr. Barker had something to say about the extremes to which some medical societies are going in their quest of public good will.

"Serious consideration of the public relations of medical societies is relatively new and most of us should confess a good deal of ignorance of the whole business," Dr. Barker said. "I have heard it talked about with zeal and enthusiasm, but I must admit I have not always understood what was being said. I am not confusing publicity with public relations. I am sure medical societies are entitled to a certain amount of sensible publicity so that the public may know what we are doing, particularly our participation in public affairs. A medical society deserves and should get a good press! Public relations, however, seems to be something else and I assume means the maintenance of good public opinion. I am for that, and it starts, I think, with the individual physician being an honest, good citizen always doing the best he can for his patient. From him it extends to the state society which in itself should be an honest, good citizen, always doing the best it can for its patient, that is, the public. Whether the prestige of medicine is improved by going much further than that with circus methods, I do not know. I am sure there are times when elaborate public relations programs accomplish more satisfaction to the planner than in actual enhancement of the position of medicine. Any society, regardless of its budget, should be quite sure that its plans have good hopes of success and are not just fireworks. Public relations is an exciting Wonderland for adventure and there is no lack of slick White Rabbits willing to show us around."

Dr. Barker offered the following suggestions:

"A quiet and effective means of producing favorable public opinion for state medical societies is the extension of their participation in voluntary organizations engaged in the health and welfare field. . . . With alert planning and consistent effort our societies can place useful members on the boards of directors of the private agencies and accomplish three desirable ends. First, the agencies are materially helped by capable medical guidance; next, the ideals and policies of medicine can be introduced into the operation of such agencies which, when left to themselves, occasionally have peculiar ideals, and, finally, the medical society, through its representatives, is brought into continuous contact with citizens who are likely to be important civic and social leaders. I have seen this plan work so well that, coupled with constructive aid to state government, I believe it to be the most substantial way for developing good public opinion and confidence."

Well said! Dr. Barker's words will be applauded by many medical society officials who feel just as he does.

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President's Position Unaltered

Like the skillful politician he is, President Truman has shifted his position on many issues when it became apparent that much was to be gained by doing so. But this has not always been the case. Despite strong opposition to his compulsory health insurance proposals and the improbability of their adoption, at least in the foreseeable future, he has been adamant in his advocacy of them. Without wishing to impugn his sincerity, there is reason to believe that he is confident that in the long run he will benefit politically by the stand he has taken.

Whatever his reasons, the President was consistent when in his January message to Congress he said:

"The greatest gap in our Social Security structure is the lack of adequate provision for the Nation's health. We are rightly proud of the high standards of medical care we know how to provide in the United States. The fact is, however, that most of our people cannot afford to pay for the care they need.

"I have often and strongly urged that this condition demands a national health program. The heart of the program must be a national system of payment for medical care based on well-tried insurance principles. This great Nation cannot afford to allow its citizens to suffer needlessly from the lack of proper medical care.

"Our ultimate aim must be a comprehensive insurance system to protect all our people equally against insecurity and ill health."

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Music Which Anesthetizes

"Music hath charms to soothe the savage breast." However, psychiatrists differ sharply as to its therapeutic value in emotional disorders.

A novel experiment in pursuit of the answer was recently suggested by a group who have enlisted the advice of a psychiatrist. They proposed to sponsor a series of musical programs to be broadcast over a local radio station for the purpose of ascertaining their emotional effect. Listeners would be asked to coöperate by responding to queries by those conducting the program. The result should most certainly be entertaining if not scientifically conclusive.

Less speculative, according to Anesthesiologist Sylvan M. Shane of Baltimore, is the value of music as an anesthetic. According to a press dispatch, Dr. Shane reported that some fifteen patients who had undergone operations at South Baltimore General Hospital had been anesthetized by music. These operations, Dr. Shane

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Queries and Answers

Q. *What is the normal relationship between leg and arm blood pressures and what is specific technic of taking leg blood pressure, re size and position of cuff, stethoscope position, patient posture?*

A. Systolic and diastolic blood pressures are higher in the legs than in the arms of normal patients. Both pressures tend to be higher in the right extremities. The average systolic pressure is 35 mm., and the diastolic 27 mm. higher in the legs. These figures were obtained in a recent study with the subjects at rest in a horizontal position for one-half hour before the test. A standard size cuff was used. In the thigh the cuff is placed over the popliteal artery with the middle of the cuff four inches above the upper edge of the patella. Ballooning is prevented by wrapping a towel securely around the cuff. The use of a special wide (17 cm.) cuff is reported to be more accurate for leg blood pressures but is not mandatory.

Q. *Having recently had a case of severe recurrent M-T (tropical) malaria who had typical serial E.K.G. changes of post-myocardial infarction in young soldier (age 33), have wondered how common it is to find malaria and myocardial infarction associated in young soldiers.*

A. During World War II there were well over one thousand men under 40 years of age who either died as the result of coronary artery disease or survived an attack of myocardial infarction. The incidence of malaria among these men was apparently no greater than the incidence among our soldiers in general. It is difficult, therefore, to make out a case for any causal relationship of malaria to myocardial infarction. Attacks of coronary insufficiency did appear to be precipitated in some cases by an infection, however. There does not seem to be any reason to think that malaria would be more important than any other infection in this regard. In none of the cases studied at the Army Institute of Pathology or by the Veterans Administration did malaria immediately precede clinical evidence of coronary artery disease.

Q. *Are there any standard or fixed regulations for the performance of D and C's and tubal ligations in the hospitals of the District of Columbia?*

A. Individual hospitals commonly have staff regulations covering the first of these operations (curettement of the uterus) where pregnancy is suspected and these regulations when present may extend also to surgical entrance of the uterus by the abdominal route. They usually require consultation, most often with a member of the attending staff in obstetrics or gynecology.

The performance of tubal ligations may likewise be subject to staff regulations. Some hospitals require a formal request for sterilization signed by both the husband and wife, duly witnessed. The writer is not in a position to comment on the legal status of such a paper.

Q. *Would avoidance of foods of high cholesterol content be helpful in cholesterol degeneration of the retina with no organic disease demonstrable?*

A. There is no clinical entity "cholesterol degeneration of the retina" in the absence of organic disease. Cholesterol crystals are occasionally seen in the retina, choroid, anterior chamber, iris or vitreous following prolonged inflammation or hemorrhage. It is to be remembered that this condition is secondary, in that it occurs in degenerative conditions of the eye of long standing. There is some evidence to indicate that an increase in blood cholesterol may influence the deposition of such crystals.

Q. *List common foods containing high cholesterol percentages.*

A. The principal ones are butter, egg yolk, fish, particularly fish roe, lard, suet, and the organ meats, such as kidney, brain, liver, etc.

Q. *Where should a hospital draw the line on treatment to patients coming into the dispensary? A local hospital treats all patients at least twice without a pass, including compensation cases, which I believe infringes on private practice.*

A. Most of the D. C. hospitals which treat outpatients are parties to an agreement with Health Security Administration and the Community Chest Federation. The agreement provides that the hospital will not give free treatment at less than cost to dispensary patients, and then only in accordance with a clinic pass issued by Health Security Administration, which determines the worthiness of each patient to receive financial assistance. In order not to withhold treatment from a needy patient without a clinic pass, the hospital is assured payment for a first visit provided the hospital "endeavors" to collect at least the minimum fee and refers the patient to Health Security Administration before the next visit. If Health Security Administration finds such patient able to pay, it "rejects" the patient to a private physician of the patient's own choice through the Medical Bureau. In some instances (e.g., removing foreign body from eye) a hospital prefers to see the patient a second time to check results of the first treatment. About 70 per cent

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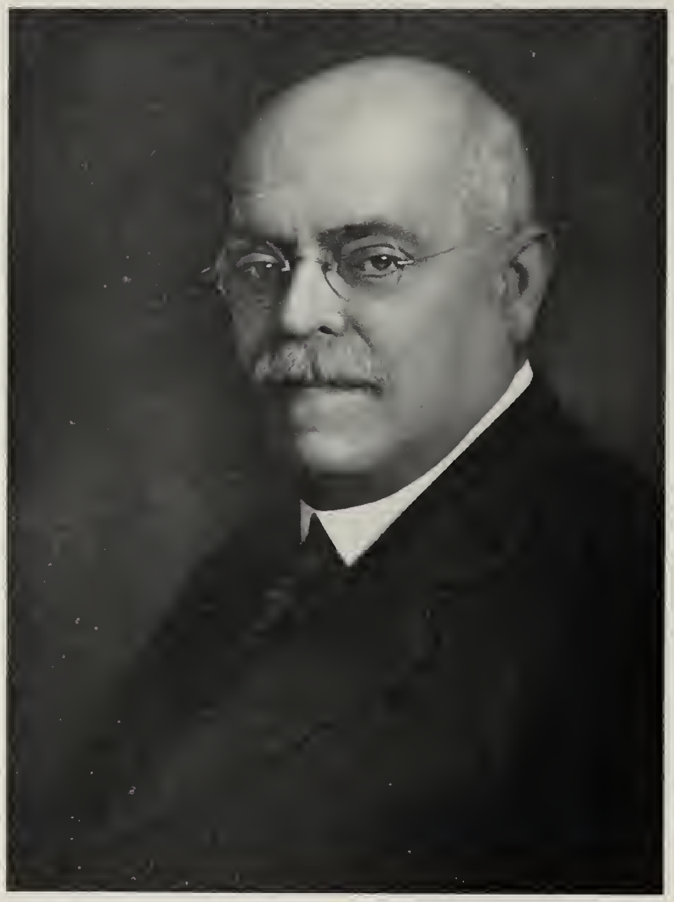
Washington Physicians of Yesterday



LOUIS MACKALL III, M.D.

Through three generations in lineal succession, covering a period of more than a century, there were three prominent physicians in Georgetown, D. C., who successively bore the name Louis Mackall.

Louis Mackall I: Born in Georgetown in 1801; M.D., University of Maryland, 1824; located for a time in Prince Georges County, Maryland; returned in 1840 to Georgetown, where he died in 1876. He was not a very active practitioner of medicine, but was interested in physiology and published a number of works on his theory of muscular action and other physiological subjects.

Louis Mackall II: Son of Louis Mackall I above, born April 10, 1831, in Prince Georges County. M.D., University of Maryland, 1851. He engaged in the general practice of medicine in Georgetown and vicinity, where for eighty years he and his son Louis III were leading physicians. He was connected with Providence, Columbia, Garfield and Emergency Hospitals, and was Professor of Clinical Medicine and of Physiology in Georgetown University Medical School. He was a member of the Common Council and Board of Health of Georgetown. He was active in committee and official service in the local medical organizations, being President of the District Medical Association, 1876–79, and of the Medical Society, 1880. He was active in the movement which in 1864 vivified the Medical Society by the establishment of weekly meetings for the presentation of scientific papers. He married Margaret W. McVean in April, 1851; and he died April 18, 1906. At a memorial meeting of the Medical Society held in his honor,

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KELLOGG MEDICAL LECTURES

The George Washington University School of Medicine will present a series of eighteen evening lectures for physicians of the Washington area during January–April of this year. The series will be known as the "Kellogg Medical Lectures" in recognition of grants received for postgraduate medical education from the W. K. Kellogg Foundation of Battle Creek, Michigan. The series will be a part of the larger program of postgraduate courses offered by the School of Medicine, attended largely by out-of-town physicians.

The Kellogg Medical Lectures will be presented at the School of Medicine, 1335 H Street, N.W., on Tuesday and Thursday evenings. One or two lectures will be presented each week. According to Dr. Walter A. Bloedorn, Dean of the School of Medicine, the topics for discussion have been chosen for their timeliness and general interest to the profession, regardless of specialty.

The following guest speakers are scheduled to take part in the evening lecture series:

Dr. J. S. L. Browne, McGill University, Montreal
Dr. Lewis Dexter, Harvard University
Dr. N. J. Eastman, Johns Hopkins University
Dr. Daniel C. Elkin, Emory University, Atlanta
Dr. Thomas Francis, University of Michigan
Dr. Evarts A. Graham, Washington University, St. Louis
Dr. Arthur Grollman, Southwestern Medical College, Dallas
Dr. Edwin C. Hamblen, Duke University
Dr. Herman E. Hilleboe, New York Department of Health, Albany
Dr. J. Albert Key, Washington University, St. Louis
Dr. Nolan D. C. Lewis, Columbia University
Dr. Robert L. Patterson, Allegheny General Hospital, Pittsburgh
Dr. J. Laurence Pool, Neurological Institute of New York
Dr. Fred W. Rankin, University of Louisville
Dr. Julian M. Ruffin, Duke University
Dr. Milton J. E. Senn, Cornell University, New York City
Dr. J. S. Tassman, University of Pennsylvania
Dr. Douglas A. Thom, Tufts College, Boston
Dr. Richard L. Varco, University of Minnesota
Dr. J. S. Wechsler, Columbia University
Dr. Paul D. White, Harvard University
Dr. Priscilla White, Tufts College, Boston
Dr. Lawson Wilkins, Johns Hopkins University

Drs. Clayton B. Ethridge, Roy Hertz, Winfred Overholser and Dorothy Donley-Dowd are among the local physicians who will participate in the program.

About seventy-five doctors from other cities will attend each of the sessions, Dr. Thomas M. Peery, Director of Postgraduate Instruction, stated. Enrollment by Washington physicians will be restricted to 100 because of limited accommodations. A fee of $10.00 is charged for the series. Interested physicians may contact Dr. Peery at the School of Medicine.

NATIONAL HEART WEEK, FEBRUARY 8–14

National Heart Week has been observed this month, February 8–14. The American Heart Association, Inc., issued a pamphlet explaining its program and activities, entitled "1 out of 3," which title was derived from the fact that 1 out of every 3 deaths in the United States is due to diseases of the heart and blood vessels.

The pamphlet contains a number of interesting facts regarding heart disease. One out of every 20 persons suffers from diseases of the heart and blood vessels. In 1944, diseases of the heart and blood vessels stood first among the six highest causes of death, with a toll of 575,000; cancer was second, with 171,000; and tuberculosis, sixth, with 55,000. In fact, heart disease took a greater death toll than the next five leading causes combined.

Of 35,000,000 people in the United States over the age of 45, one out of five has some form of heart disease. The total number of deaths in this group averages 1,000,000 a year. At least 450,000 deaths are directly due to diseases of the heart and blood vessels. Thus, nearly one out of every two deaths after the age of 45 is caused by heart disease.

It is the leading fatal disease among children between the ages of 10 and 15.

Dr. George C. Ruhland, Health Officer, reported that heart ailments caused more deaths in Washington in 1947 than did any other disease and was one of the few showing an increase in the death rate. For every 100,000 Washington residents, those dying from heart ailments numbered 276.7, as against

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Hospital News

SUBURBAN HOSPITAL

Officers of the Medical Staff for 1948:
- Dr. Arch L. Riddick, Chairman
- Dr. Sidney C. Cousins, Vice Chairman
- Dr. Barton W. Richwine, Secretary

Executive Committee of the Medical Staff:
- Dr. Riddick, Chief of Surgical Service
- Dr. Charles R. L. Halley, Chief of Medical Service
- Dr. Walter W. Boyd, Chief of Obstetrical and Gynecological Service
- and Drs. Cousins, Richwine, G. Haven Mankin, John G. Ball, Edward J. Stieglitz and William F. Burdick.

ALEXANDRIA HOSPITAL

Officers of the Medical Staff for 1948:
- Dr. Colin MacRae, President
- Dr. A. E. Drexel, Vice President
- Dr. Jefferson D. Kernodle, Secretary

The Medical Staff meets the first Wednesday of each month at 8:15 p.m. in the auditorium of Carter Hall, Alexandria, Va.

CHILDREN'S HOSPITAL

Officers of the Medical Staff for 1948:
- Dr. Joseph S. Wall, Chairman
- Dr. Edgar P. Copeland, Vice Chairman
- Dr. William F. Burdick, Secretary

Executive Officers:
- Dr. Hugh J. Davis, Medical Department
- Dr. John H. Lyons, Surgical Department
- Dr. Isadore Lattman, Laboratories
- Dr. S. A. Alexander, Eye, Ear, Nose and Throat

New Departments:

(a) Department of Admissions under the direction of Mrs. Irene Auchterlonie. This service covers private, ward and dispensary admissions, schedules operations, and makes room reservations.

(b) Public Relations Department under the direction of Mrs. Peyton Hawes Dunn. This department receives and acknowledges all gifts, collects material for newspapers, publishes the *Arrow*, and furnishes photographic services.

(c) Department of Volunteer Services under the direction of Mrs. Annette White to coördinate and integrate volunteer activities with the work of the Hospital.

PROVIDENCE HOSPITAL

Officers of the Medical Staff for 1948:
- Dr. Leo B. Gaffney, President
- Dr. Paul J. O'Donnell, Vice President
- Dr. Claud C. Caylor, Secretary

A committee under the chairmanship of Dr. H. H. Leffler has been appointed to reorganize and establish a Cancer Clinic in the Outpatient Department. Dr. Casimer Leibell will act as consultant.

The Medical Staff By-laws have recently been revised and have now gone to press.

A Staff Education Committee has been established with Dr. H. H. Leffler as Chairman, and Drs. Samuel Zola, Joseph G. Sheffery and W. C. Lambert as members of the committee.

ARLINGTON HOSPITAL

Officers of the Medical Staff for 1948:
- Dr. Alfred M. Palmer, President
- Dr. Allen Ferry, Vice President
- Dr. John E. Alexander, Secretary

Members of the Executive Committee of the Medical Staff, in addition to the officers named above, are Drs. W. C. Welburn, Richard N. Sutton and John T. Hazel. Dr. William D. Dolan, pathologist, and Dr. H. Tuttle Stull, radiologist, are members *ex officio.*

Chiefs of Service:
- Dr. Raymond Schwartz, Medicine
- Dr. Norvell Belt, Surgery
- Dr. J. Bay Jacobs, Obstetrics and Gynecology
- Dr. Robert H. Detwiler, Pediatrics

SAINT ELIZABETHS HOSPITAL

Dr. Isadore Rod has been appointed visiting ophthalmologist to the Hospital.

Dr. Rema Lapouse, who was granted a stipend by the U. S. Public Health Service for one year's training in psychiatry at Saint Elizabeths Hospital under the National Mental Health Act, reported for duty on January 2, 1948.

Dr. Stanley Olinick, Medical Officer, resigned on December 1, 1947, to enter private practice.

Three Navy physicians, Lieutenants Morton Johan, John W. Hanni, and William A. Viele, Jr., assigned by the United States Navy Department to

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News and Personals

The American College of Physicians will conduct its 29th Annual Session at San Francisco, April 19–23, 1948, with general headquarters in the Civic Auditorium.

The College is sponsoring a series of postgraduate courses during the spring months in various cities of the United States. **Course No. 5 on Internal Medicine** will be given at Gallinger Municipal Hospital, Washington, from May 17 to 22. As in 1946, **Dr. Wallace M. Yater,** Governor of the College, will direct the course, which is designed for internists who wish to keep abreast of recent developments in the field of internal medicine and who are interested in learning newer technics in the diagnosis and treatment of disease. Officers of instruction will include outstanding members of the faculties of medicine of Georgetown and George Washington University Schools of Medicine, members of the staffs of the National Institute of Health, Walter Reed General Hospital, the National Naval Medical Center, and the Veterans Administration, as well as distinguished out-of-town guest speakers.

Assisting Dr. Yater on the Program Committee will be Dr. Thomas McP. Brown, Professor of Medicine, George Washington University School of Medicine; Dr. Hugh H. Hussey, Jr., Assistant Clinical Professor of Medicine, Georgetown University School of Medicine; Dr. James J. Griffitts, of the National Institute of Health; Colonel Charles R. Mueller, M.C., U.S.A., Chief of Medicine, Walter Reed General Hospital; and Dr. Walter K. Myers, Assistant Clinical Professor of Medicine, George Washington University School of Medicine.

The fee for this course will be $30 for members of A.C.P. and $60 for non-members. E. R. Loveland, Executive Secretary of the American College of Physicians, will provide registration forms upon request. His address is 4200 Pine Street, Philadelphia.

Out-of-town physicians may secure hotel accommodations by addressing Mr. C. C. Schiffeler, General Manager, Hotel Raleigh, Washington, D. C. or Mr. MacLellan King, Sales Director, Mayflower Hotel, Washington, D. C. Physicians should identify themselves with the College and this particular course when writing for reservations.

IMPORTANT NOTICE TO PHYSICIANS

The Washington Chest X-ray Survey now in progress has the approval of the Medical Society. Because the Survey will lose much of its value unless all of the positive and suspicious cases found are followed for a period of at least two years, the Subcommittee on Tuberculosis recommends that the Society urge every member having patients with tuberculosis under his care to coöperate fully with the Health Department by making the required periodic examinations and reports and forwarding to the Health Department such X-rays and other data pertinent to the case as are requested by the Department.

The American Psychiatric Association, the oldest national medical organization in the United States, will hold its next annual meeting at the Hotel Statler, Washington, May 16–20. **Dr. Winfred Overholser,** President of the Association, predicts an attendance of about 2,500 psychiatrists and guests, since examinations of the American Board of Psychiatry and Neurology will be held at St. Elizabeths Hospital the preceding week, and the meeting of the American Psychoanalytic Association will be held in conjunction with that of the A.P.A. He states that an interesting scientific program is being arranged, as well as suitable entertainment for the guests.

Dr. Dexter M. Bullard of Chestnut Lodge Sanitarium, Rockville, Md., is Chairman of the Committee on Arrangements. Mrs. Ernest E. Hadley of Washington is Chairman of the Subcommittee on Ladies' Activities.

The Areal Meeting of the American Academy of Pediatrics will be held at the Hotel Statler, Buffalo, New York, April 29 to May 2, 1948. Members of state medical societies are cordially invited to attend. The registration fee for non-members will be $10.00, which will include a ticket to the banquet. Registration may be made in advance by writing to Dr. C. G. Grulee, Secretary-Treasurer, American Academy of Pediatrics, 636 Church Street, Evanston, Ill.

The regular monthly meeting of the **Society of Registered X-ray Technicians** will be held Tuesday evening, March 9, at 8 p.m., in the Medical Society's Library. Members are urged to be present, and anyone interested in X-ray is welcome.

The Silver Spring Academy of Medicine will have as its guest speaker, March 1, **Dr. Eugene J. McDonald,** whose subject will be "The Value of X-ray Therapy in Common Benign Conditions." Discussants will be Drs. William W. Stanbro and Ralph M. Caulk.

The District of Columbia Dental Society is presenting its Annual Postgraduate Clinic, March 14–18, at the Shoreham Hotel. Members of the District Medical Society are cordially invited to attend. Free parking arrangements for those who attend the meeting will be available.

At the meeting of the **Executive Board,** December 29, a number of appointments of interest to Society members were made. **Dr. William P. Herbst** was added to the membership of the Committee on the Davidson Portrait Fund.

The Board expressed the Society's gratitude to **Dr. James A. Gannon** for his excellent broadcasts over Mutual Station WOL, which have now been discontinued, and took cognizance of the great amount of time he had devoted to them.

A Special Committee on Medical Care in Public Institutions was created.

Dr. Frederick O. Coe was nominated to succeed himself as Vice President of the Washington Academy of Sciences, representing the Medical Society.

The American Board of Ophthalmology announces that practical examinations for 1948 will be held in Baltimore, May 20–25, and in Chicago, October 6–9. Written Qualifying Tests will be held annually, probably in January of each year. Applicants for the January 1949 Written Qualifying Test must be filed with the Secretary, Dr. S. Judd Beach, Executive Office, Cape Cottage, Maine, before July 1, 1948.

Candidates who successfully completed the Part I examination of the **American Board of Obstetrics and Gynecology** will proceed automatically to the Part II examination, to be held in Washington, D. C., May 16–22. Notice of the exact time and place will be sent to all candidates well in advance of the examination date. Further information may be secured from Dr. Paul Titus, Secretary of the Board, 1015 Highland Building, Pittsburgh, Pa.

The Section on Neurology and Psychiatry met in the Society's Library, January 8. The following papers were presented: "The Hyperventilation Syndrome," Dr. Walter Freeman; "Peripheral Pathways for Pain," Dr. Francis D. Threadgill.

Members of the **Medical Society of St. Elizabeths Hospital** heard Dr. John C. Whitehorn, Professor of Psychiatry at Johns Hopkins University, speak on "Clinical Evaluation and Activation of Personality Assets," January 15, at Hitchcock Hall.

The George Washington University Medical Society held a Symposium on Hypertension, January 17. Following an introduction by Dr. Thomas M. Brown, the following papers were presented:

"The Electrocardiogram in Hypertension," Dr. J. Burton Glenn.

"Experience with the Use of Tetraethyl Ammonium Chloride in Hypertension," Dr. Paul F. Dickens.

"The Use of the Rice Diet in Hypertension," Dr. Maurice Protas.

"Surgical Treatment of Hypertension," Dr. W. Ross Morris.

Dr. Francis Heed Adler, of Philadelphia, addressed the **Washington Ophthalmological Society,** January 5, in the Medical Society's auditorium. His address was entitled, "The Progression of Field Changes and Lesions around the Chiasm—Comparison of the Theoretical with the Actual Changes Found." The program also included a number of case presentations.

The Society held a special meeting in conjunction with the Eleventh Annual George Washington University Postgraduate Course in Ophthalmology, January 29. Guest speakers were Dr. Raymond L. Pfeiffer and Dr. Charles Allen Perera, both of Columbia University, New York. Dr. Pfeiffer spoke on "The Roentgenographic Diagnosis of Tumors of the Eye and Orbit," and Dr. Perera on "Management of Tumors in Ophthalmology."

The Clinical Society of the Diabetes Association of the District of Columbia, Inc. met in the Society's auditorium, January 22. The following program was presented: "The Diagnosis of Diabetes Mellitus," Dr. T. Nelson Carey, Professor of Clinical Medicine, University of Maryland; "The Dietary Management of Diabetes," Dr. Lawrence J. Thomas, Associate in Medicine, George Washington University School of Medicine; and "The Insulins," Dr. Edward S. Dillon, President of the American Diabetes Association, and Associate Professor of Metabolic Diseases of the University of Pennsylvania Graduate School.

The Washington Society for the Advancement of Psychotherapy, Inc., and the Washington Institute for Psychotherapy, Inc., held a joint meeting, January 7, in the Medical Society's building. The program consisted of a Symposium on Headache: Psychogenesis and Psychotherapy. Participants were Drs. Leonard S. Gilman, Leopold E. Wexberg, Frank S. Caprio, Philip Litvin, Ben Karpman and Louis S. London. Discussion of papers was led by Drs. Leo Kanner and Jacob Conn of Johns Hopkins University School of Medicine.

Some recent changes in and additions to the faculty of **George Washington University School of Medicine** have been announced:

On February 1 Dr. Thomas McPherson Brown, formerly Chief of Medicine of Mt. Alto Hospital, assumed his new duties as full-time Professor of Medicine and head of the medical service of the new Hospital. He has been on the teaching staff of the School of Medicine as Adjunct Clinical Professor of Medicine since August, 1946. He will continue to hold the post of special consultant on arthritis to the Veterans Administration.

CALENDAR OF MEETINGS

January 3	Washington School of Psychiatry
January 5	Washington Ophthalmological Society
January 6	D. C. Dietetic Association
January 7	Graduate Nurses' Association
	Washington Society for the Advancement of Psychotherapy
January 8	Committee on Industrial Medicine
	Subcommittee on Mental Health
	Section on Neurology and Psychiatry
January 12	Graduate Nurses' Association
January 13	Committee on Arrangements, 19th Annual Scientific Assembly
	Committee on Public Policy
	District Dental Society
	Registered X-ray Technicians of Washington
January 14	Scientific Meeting of Society
	Woman's Auxiliary
January 15	Advisory Committee to Washington Chest X-ray Survey
January 17	Washington Psychoanalytic Society
January 19	District Selective Service Association
January 20	D. C. Medical Technicians
January 22	Committee on Industrial Medicine
	Washington Diabetes Association
January 23	Grievance Committee
	Washington Committee for Education on Alcoholism
January 24	Board of Censors
January 26	Executive Board
	Board of Censors
January 27	Section on Anesthesiology
	Section on General Practice
January 28	Scientific Meeting of Society
January 29	Section on Radiology
	Joint meeting of Washington Ophthalmological Society and Department of Ophthalmology, George Washington University School of Medicine

Dr. Paul Magnuson, Acting Assistant Director of the Department of Medicine and Surgery, Veterans Administration, will hold the title of Adjunct Clinical Professor of Surgery and will teach on a part-time basis.

Dr. Charles S. Wise, Associate Professor of Physical Medicine and Director of the Department of Physical Medicine, comes to the University from Simmons College, where he has been special instructor in physical medicine since July, 1947. He is a graduate of New York University College of Medicine.

Dr. Robert Pelley Hill, Assistant Professor of Pathology and Assistant Director of the Pathological Laboratories, has been Director of the Stout Todd Laboratory in Brownsville and Harlingen, Texas, since 1946. He received his doctor's degree from the University of Indiana in 1935.

Other appointments include Dr. Carl Berg, Assistant Clinical Professor of Orthopedic Surgery; Dr. Lloyd Burke, Clinical Instructor in Surgery; Dr. Maurice Franks, Clinical Instructor in Medicine; Colonel Frank E. Hamilton, Adjunct Clinical Professor of Surgery; Dr. Neel J. Price, Instructor in Obstetrics and Gynecology; Dr. Thomas Stone Sappington, Clinical Instructor in Medicine; and Dr. Joe M. Van Hoy, Clinical Instructor in Surgery.

The new **Red Cross Blood Donor Center,** which opened January 5, is located on the ground floor of the District Red Cross headquarters, 1730 E Street, N. W. Volunteer blood donors may telephone District 5042 for appointments. The Center will receive donors from 10 a.m. to 2 p.m.

Since the new Center does not expect to average more than 200 donors a week for the first few months, the Red Cross officials advised each hospital to plan to maintain its present system of obtaining blood for transfusions. As the program expands, the Red Cross will begin to furnish the entire supply for Washington area hospitals and will continue to supply blood to the U. S. Naval Hospital and to Mount Alto, as it has done since the termination of the wartime program for the armed forces.

Dr. Montgomery Blair, Jr., Director of Children's Hospital, is Chairman of the Medical Advisory Committee for the Center. His appointment was approved by the Executive Board of the District Medical Society at a meeting, December 29, when approval was also given to the appointment of Drs. Worth B. Daniels, Robert J. Coffey, John L. Parks and Maurice A. Selinger as members of the Committee. Dr. James J. Griffitts will represent the U. S. Public Health Service on this Committee. The medical consultant for the Center is Dr. John B. Ross.

The District Medical Society and other health agencies have pledged their coöperation to the Red Cross in this project. The Community Blood Plasma Bank, now sponsored by the Medical Society and located at George Washington University Hospital, will remain in operation, at least temporarily.

In conjunction with the **U. S. Public Health Service** and the **National Cancer Institute,** the Society's **Committee on Cancer Control** is endeavoring to obtain blood specimens from the general population for analysis as part of a cancer research project. The objectives are two-fold: (1) to determine the incidence of elevated acid phosphatase levels in the general population, and test its reliability as a routine screening procedure; and (2) to determine the incidence of low vitamin A levels in the general population as the first step in screening process for detecting silent gastrointestinal cancer.

Booths have been arranged by the Public Health Service in connection with the Chest X-ray Survey. A placard placed over the booth reads: "Any individual over 40 years of age who is willing to donate 10–20 c.c. of blood for cancer research may do so now at this booth." A technician draws the blood and also obtains the name of the patient, his address, and his family physician. If the findings are positive, the doctor will be contacted and advised as to the nature of the project and the follow-up procedures desired. All follow-up work will be done through the doctor and results forwarded to him. The Committee urges all physicians to coöperate to the fullest extent in this cancer research project.

Dr. Paul R. Hawley, former Medical Director of the Veterans Administration, will become the Chief Executive Officer of the **Blue Cross and Blue Shield prepaid hospital and health service plans,** effective April 1. His headquarters will be in Chicago. The appointment was made public at a dinner at the Hotel Statler, January 10.

Blue Cross, approved by the American Hospital Association, comprises 91 non-profit hospital service prepayment plans in the United States and Canada. Blue Shield, endorsed by the American Medical Association, includes 48 non-profit medical-surgical service prepayment plans. Estimated enrollment in Blue Cross on January 1 was 29,250,000 and of Blue Shield, 7,250,000, according to officials of the two organizations.

Mr. Roy E. Larsen, of New York, President of Time, Inc., was toastmaster at the dinner. Speakers were Mr. Carl Gray, Veterans Administrator; Dr. Edward L. Bortz, of Philadelphia, President of the AMA; and Graham L. Davis, of Battle Creek, Mich., President of the American Hospital Association.

Dr. Frank D. Costenbader, President of Medical Service of the District of Columbia, Theodore Wiprud, Secretary of the District Medical Society, and E. J. Henryson, Director of Group Hospitalization, Inc., were among the dinner guests.

Dr. John Minor was host to members of the **Clinico-Pathological Society,** January 20. Dr. William B. Marbury contributed a paper on "Pancreatic Cysts with Special Reference to Pancreatic Fistula."

The Prince Georges County Medical Society elected the following officers on December 2, 1947, most of whom are Associate members of the District Medical Society:

Dr. George J. Hageage, Cottage City, *President;* Dr. Oscar Lavine, Mt. Rainier, *Vice President;* Dr. Irvin M. Grassgreen, Mt. Rainier, *Corresponding Secretary;* Dr. Wolcott L. Etienne, Berwyn, *Recording Secretary;* Dr. Samuel J. N. Sugar, Mt. Rainier, *Treasurer;* and Dr. Thomas A. Christensen, College Park, *Delegate to Medical and Chirurgical Faculty of the State of Maryland.*

Veterans Administration reports a number of changes among its administrative personnel. Upon the resignation of General Omar N. Bradley, Administrator, Carl R. Gray assumed office, December 1. Dr. Paul R. Hawley, Chief Medical Director, resigned January 1 and has been succeeded by Dr. Paul B. Magnuson, who has been associated with VA's Department of Medicine and Surgery since its inception, January 3, 1945. Dr. Hawley will continue to serve in an advisory capacity as special assistant to Mr. Gray on medical problems.

Dr. W. Paul Briggs, Chief of the Pharmacy Division of VA since March, 1946, resigned his position, December 24, 1947.

The physicians listed below have been designated by the **District Health Department to care for the indigent of the city,** according to a statement made by Dr. George C. Ruhland, Health Officer. The physicians are assigned according to police precincts and they in turn will be available for call by the station of the precinct in which the call originates. They are: Drs. William Lewis, Jr. (Nos. 1, 2, 4, 7, 8 and 13 precincts); Dr. Richard H. Meredith (Nos. 2 and 13); Dr. Samuel Dessoff (No. 3); Dr. Howard E. Neuman (No. 5); Dr. John L. DeMayo (Nos. 10, 12 and 13); Dr. Lendall C. Gay (No. 9); and Dr. Henry R. Pear (No. 11).

At the request of Dr. Walter Stokes, Chairman of the Society's Committee on Public Relations, several Society members accepted assignments to appear before lay organizations during the past weeks. **Dr. Walter H. Gerwig** addressed the D. C. Chapter of the American Society of Chartered Life Underwriters on February 9 at the Mayflower Hotel. His subject was "Highlights of Recent Medical Progress."

Dr. James A. Gannon spoke on "The Outlook for Increasing the Span of Human Life" before the Washington Round Table at the Washington Hotel, January 9.

At a luncheon meeting of the Civitan Club, January 27, **Dr. Leonard M. Dub** discussed "Contributions of Modern Psychiatry." The meeting was held at the Mayflower Hotel.

Dr. S. Jack Sugar has just returned to Washington after two years' postgraduate study in orthopedic surgery. After being released from Army service, Dr. Sugar spent a year at the Steindler Clinic, State University of Iowa School of Medicine, Iowa City, and the past year at Charleston General Hospital, Charleston, West Va. He opened his office, January 1, at 1801 Eye Street, N. W.

Drs. J. J. Mundell, S. P. Hicks and H. R. Downey are assisting in the Conferences and Clinics of the National Naval Medical Center at Bethesda. A previous list of participants was published in the December issue of the Annals.

140 Million Patients. Carl Malmberg. Price, $2.75. Pp. 242. New York: Reynal, 1947.

Another voice has been heard in the current controversy over compulsory health insurance. The voice is that of Carl Malmberg but the song is not new. Indeed, those who are familiar with efforts of Isidore Falk in this field will not be surprised at the contents of Mr. Malmberg's book. The main points of Mr. Malmberg's thesis are: (1) The United States, far from being the "healthiest Nation in the world," really makes a sorry showing in International Vital Statistics and in the Selective Service data. (2) The poor people have more illness than the more prosperous but get less care. (3) Medical care is too costly and could be made much less expensive by completely abolishing sole practice, or "push cart medicine," in favor of group practice. (4) Medical facilities are poorly distributed. (5) The quality of medical care in this country, at best, is very inferior. Our hospitals are rat-infested fire traps. Our doctors are stupid, inept and neglectful. They are deficient in diagnostic acumen and are not only incapable of proper therapeutic management, but will gladly sacrifice the patient's welfare in order to line their pockets with the proceeds of unnecessary operations. (6) Voluntary insurance plans are too expensive and hopelessly inadequate. They have no promise whatsoever of filling our needs. (7) The one and only solution is to adopt a compulsory, governmentally-operated health insurance enterprise. Such enterprise, as provided for in S. 1320, would solve all our difficulties.

Without questioning, for the moment, the factual basis of Mr. Malmberg's arguments we are forced to wonder why he, or Mr. Falk, or the Honorable Senators and Congressmen are so eager to obtain a wider distribution of physicians' services if the physicians are really such stupid, bungling, and dishonest scoundrels as Mr. Malmberg has so painstakingly pictured them. Are we to assume that when all physicians become employes of the Government they will not only lose all interest in monetary rewards, but also, that they will at once gain the diagnostic acumen and therapeutic skill that years of schooling and experience have failed to give them? Or must we wait for the present generation of scoundrels to die off so that fresh young men, properly educated and trained, can come to our rescue?

But what is a proper education and training for a doctor? How is a doctor made? The medical student, if not an imposing intellectual, probably comes from that great mass known as average men. He certainly is not recruited from the morons and feeble-minded. He is subjected to a long, grueling process of learning under men who are selected by our leading universities for their competence in their chosen fields. Perhaps this is all wrong. Maybe an all-wise governmental bureau, free from all human error, could do better than our great state and private universities. What has Mr. Malmberg in mind?

One thing is quite obvious. He has tried to picture our present provision of medical care in as unfavorable light as possible. He cites one example after another of mistakes made by doctors. We do not deny our errors—we publish them, so that we may profit from them and improve our methods. But Mr. Malmberg does not pay his respects to a body of men with such courage and frankness. Of course we make mistakes. The tools at our command are not perfect. Not only the usual and traditional diagnostic methods, but our newer laboratory aids, including the X-ray, are subject to significant errors. Doctors are human, and despite the best of training they will undoubtedly make errors of judgment—errors of omission and commission. Also, unfortunately, out of 150,000 men who have gained the right to practice medicine there are undoubtedly a few who are not honest.

Without passing judgment on Mr. Malmberg's honesty, it is clear that his zeal and bias have led him to strain his statistics to the point of herniating more than a few figures far outside the bounds of permissible usage. His treatment of Selective Service data is quite in harmony with the methods of Mr. Falk. These have been fully discussed elsewhere. But Mr. Malmberg places the United States last in a list of 22 nations with respect to maternal mortality. He does not warn the unsuspecting reader that the statistics from many of these countries are not entirely reliable. Uruguay, which is sixth on his list, has had no census since 1908.[1] Japan, in first place, lists 10.4 per cent of all deaths as due to senility, ill-defined, or unknown causes; and Venezuela, in seventh place, throws 60 per cent of all deaths into this catch-all.[2, 3] To students of vital statistics the proportion of unclassified deaths is a rough measure of the unreliability of the specific mortality rates and is also a guide to the presence or absence of medical attention at the time of death. Of the 21 countries which Mr. Malmberg places ahead of the United States only Canada has a lower proportion of unclassified deaths (2.2 per cent vs. 2.0).

In many respects the Netherlands, the Scandinavian countries, Australia and New Zealand have better health statistics than our own. Conversely, the 1939 death rate for tuberculosis was much lower in the United States than in Finland, Norway or Sweden, and the same was true for pneumonia. Indeed with respect to this disease, which should more sensitively reflect medical intervention than most other diseases, only New Zealand and Canada had lower mortality rates. These facts, and many others in our favor, Mr. Malmberg could have cited had he wished to be fair.

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[1] Dunn, H. L.: Summary of International Vital Statistics, 1937–44. Washington, D. C.: U. S. Government Printing Office, 1947, p. 69.

[2] Dunn, H. L.: Ibid., p. 41.

[3] Dunn, H. L.: Ibid., table 20.

Admittedly, we do not have the right to assert that our Nation is the "healthiest in the world." Despite our satisfactory progress there is much room for further improvement. But the health of a nation is not determined solely by the number of available doctors or the cost of medical care. We need only to refer to the course of infant and maternal mortality during the War years to illustrate this point. With about one-third fewer doctors available to the civilian population the infant mortality decreased from 47.0 in 1940 to 38.3 in 1945, and during this same period maternal mortality decreased from 3.8 to 2.1.[4] No, the health of a community is not determined solely by the volume of medical services available. There are other factors of equal or greater importance. It is high time that we educate the lay public to identify and assess these factors. It is clear that we cannot entrust such education to Mr. Malmberg or to any other disciple of Mr. Falk.

Maurice H. Friedman, M.D.

Gifford's Textbook of Ophthalmology, 4th ed. Francis H. Adler, M.D., Professor of Ophthalmology, University of Pennsylvania Medical School. Price, $6.00. Pp. 512, with 310 illustrations. Philadelphia: Saunders, 1947.

Dr. Sanford Gifford's original purpose in preparing his "Textbook of Ophthalmology" was to compile a book containing the essential facts of modern ophthalmology, which might be useful to medical students and general practitioners. This he did admirably and Dr. Adler in his revision has carried out this purpose even more boldly. It is a fact that most ophthalmology textbooks, no matter how small, have contained many details and technics which are of no value to the medical student and to the physician not specializing in ophthalmology.

The present edition has given much less detail on the technic of refraction and surgery, since it was felt that these were of little value except to the ophthalmologist. In line with the above reasons the relation of the eye to general medical and neurological diseases has been covered more effectively and completely than in previous editions. The section on retinal vascular diseases is also extremely well written and should prove of value to any physician.

Dr. Adler is not only a renowned clinical ophthalmologist but also is one of the leading eye physiologists. This firm physiological background can be noted not only in the chapter on physiological optics but throughout the text.

The illustrations, as in the earlier editions, are excellent, containing numerous color plates and black and white drawings and diagrams, which greatly enhance the text.

The resulting book is somewhat larger than the original Gifford textbook, but it still is a relatively small, compact text admirably fitted to carry out the goals pursued and is, in this observer's opinion, the best eye reference book for the general medical man.

Practical Child Guidance and Mental Hygiene. Samuel Kahn, M.D., Ph.D., Adjunct Professor of Psychology and Psychiatry at Long Island University; formerly Professor of Neurology and Psychiatry at Georgetown and George Washington Universities; Chief Psychiatrist, New Jersey and Delaware Induction Boards for the U. S. Army; Grace Kirsten, A.B., formerly with the New York City Department of Education and Lecturer on Child Guidance; May Elish March, A.B., M.A., formerly a teacher in the New York City High Schools. Price, $4.00. Pp. 285. Boston; Meador, 1947.

Child guidance of today has become the key to sane and wholesome living of tomorrow. The rapidly increasing complications of life in our present civilization force us to recognize the importance of proper knowledge of balanced physical, mental and emotional growth.

Kahn, Kirsten and March have attempted to convey such knowledge in the simplified form of questions and answers. This no doubt is valuable for practical use, but at times it leads to oversimplification of the subject matter. The scope of the questions is extensive, and on the whole the answers are clear and precise.

Physicians, parents, teachers, and all who are caring for children will find this book a helpful guide in all questions of child management.

Catherine Knop, M.D.

MEETINGS

Wednesday, March 10

The Section on Neurology and Psychiatry will sponsor the program. Speakers and subjects to be announced.

Wednesday, March 24

The program will be presented by the *Washington Gynecological Society*. Speakers and subjects to be announced.

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[4] U. S. Summary of Vital Statistics, 1945. Washington, D. C.: U. S. Government Printing Office, 1947, 26, 7, table A.

MEMBERSHIP

The following applicants for membership were duly elected to membership at the meeting of the Executive Board, December 29, 1947, in accord with Amendment XI, Section 2, of the Constitution and By-laws of this Society:

Active Members

Joseph Abrahams, St. Elizabeths Hospital
Robert H. Armstrong, Jr., 6654 Hillandale Road Chevy Chase, Md.
Joseph M. Barker, 1801 K Street, N. W.
Harry C. Bates, Jr., 2650 Wisconsin Avenue, N. W.
Roland Essig Bieren, 749 Upsal Street, S. E.
Daniel Blain, 3126 Woodley Road, N. W.
Irving B. Brick, 3616 Suitland Road, S. E.
Murray M. Copeland, Georgetown University Medical Center
James Melvin Corcoran, 1801 K Street, N. W.
Ernest Edwin Cornelsen, 4400 Bowen Road, S. E.
Leslie V. Dill, 3821 39th Street, N. W.
Samuel Dove, 1729 21st Street, N. W.
Thomas J. Dugan, Jr., 1535 W. Falkland Lane, Silver Spring, Md.
Wilfred W. Eastman, 210 Tulip Avenue, Takoma Park, Md.
John Robert Egan, 1835 Eye Street, N. W.
Alban W. Eger, 1801 K Street, N. W.
Otto Anderson Engh, 1835 Eye Street, N. W.
William J. Fink, 3620 Yuma Street, N. W.
Charles F. Geschickter, 1834 Connecticut Avenue, N. W.
Herbert D. Glick, 8011 Eastern Avenue, Silver Spring, Md.
Louis Goldstein, 1328 Eye Street, N. W.
Theodore A. Guenther, 8604 Maryland Avenue, Bethesda, Md.
Robert C. Haile, 35 New York Avenue, N. W.
Robert C. Hecker, 525 Mellon Street, S. E.
Montgomery E. Higgins, 2914 45th Street, N. W.
T. Wiley Hodges, 1801 K Street, N. W.
Vita Rebecca Jaffe, 1603 E Street, S. E.
Paul F. Jaquet, Jr., 2630 Adams Mill Road, N. W.
James P. Jarboe, La Plata, Md.
Leslie M. Jones, 2209 42nd Street, N. W.
Edward Allen John, 419 E. Leland Street, Chevy Chase, Md.
Sol Katz, Gallinger Hospital
Paul C. Kiernan, 1610 20th Street, N. W.
Seruch Titus Kimble, Jr., 1843 Newton Street, N. W.
Morris Kleinerman, 2025 Eye Street, N. W.
August Kramm, 3228 Woodley Road, N. W.
Henry P. Laughlin, 6627 East Avenue, Chevy Chase, Md.
Oscar Legault, 1101 Trenton Place, S. E.
Andrew A. Marchetti, Georgetown University Hospital
Shirley Sue Martin, Gallinger Hospital
Charles G. McCormack, 4849 Rodman Street, N. W.
James J. McFarland, Jr., 1150 Connecticut Avenue, N. W.
Elaine Wentink Murphy, 4812 Ellicott Street, N. W.
Charles V. Pate, 335 W Street, N. E.
Sanford Jay Randall, 1809 23rd Street, S. E.
Josephine E. Renshaw, 1901 Wyoming Avenue, N. W.
Marion Ballard Richmond, 4216 Mathewson Drive, N. W.
Albert I. Robins, 4208 Russell Avenue, Mt. Rainier, Md.
Alexander L. Russell, 900 17th Street, N. W.
Mary K. Laurence Sartwell, 1211 Jefferson Street, N. W.
Luther Sheldon, Jr., 3203 Cleveland Avenue, N. W.
William T. Spence, 1150 Connecticut Avenue, N. W.
Philip P. Steptoe, 1801 K Street, N. W.
Ralph Stiller, 3821 39th Street, N. W.
Raymond J. Terrafranca, 5 Barney Circle, S. E.
William E. Torrey, Jr., 1835 Eye Street, N. W.
Edward B. Tuohy, 5152 Manning Place, N. W.
Merton T. Waite, 1620 16th Street, N. W.
Howard L. Weinstein, 3700 Massachusetts Avenue, N. W.
Edwin H. Weitzen, 1729 21st Street, N. W.
Theodore Winship, Garfield Hospital
Theresa Ting Woo, Devens Hall, 20 Plattsburg Court, N. W.

Associate Members

John M. Bankhead, 9601 Sutton Place, Silver Spring, Md.
William P. Briggs, Ph. G., 6600 7th Street, N. W.
Ronald S. Fleischer, 5401 35th Avenue, Hyattsville, Md.
Arden Freer, 1211 Fern Street, N. W.
Grace H. Guin, 3118 Key Boulevard, Arlington, Va.
Robert C. Hunt, 1523 East Capitol Street
Harold C. Kinner, Ph. G., 301 Kennedy Street, N. W.
Major Howard R. Lawrence, M.C., U.S.A., Bolling Field, D. C.
Peter N. Lombard, 8248 Georgia Avenue, Silver Spring, Md.
George B. Patrick, Jr., 8700 Colesville Road, Silver Spring, Md.
Walter Raab, Glenn Dale, Md.
Dina Braude Rappaport, 2130 North Taft Street, Arlington, Va.
Henry Rappaport, 2650 Wisconsin Avenue, N. W.
Mario Scandiffio, 8224 Georgia Avenue, Silver Spring, Md.
George Speck, 2806 South Randolph Street, Arlington, Va.

The following applicants for membership were duly elected to membership at the meeting of the Executive Board, January 26, 1948, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

Active Members

Robert Frederick Dow, 5008 Hampden Lane, Bethesda, Md.
Frank J. Grabill, Georgetown University Hospital
Thomas S. Sappington, 1103 16th Street, N. W.
Robert Shaw Smith, 915 19th Street, N. W.

Associate Members

Lee Jarvis, B.S., 2619 42nd Street, N. W.
John Otto Robben, 3709 Calven Lane, Kensington, Md.
Fred Lowe Soper, Pan American Union
Hewitt I. Varney, 7309 Bradley Boulevard, Bethesda 14, Md.
Roy Elmer Whitehead, Marine Hospital, Ellis Island, N.Y.

The following applicants for membership will be voted on at the meeting of the Executive Board, March 29, 1948:

For Active Membership

Harry Earle Altman, University of Toronto—1940
Isabelle Blum, Edintzi University, Bessarabia, Russia—1935
Rollin Farrington Bunch, University of Chicago—1937
Henry H. Canton, Hahnemann College—1940
Joseph Vincent Casella, George Washington University—1940
Robery Dwyer Cawley, Georgetown University—1942
Francis J. Crilley, Jr., George Washington University—1943
James A. Gannon, Jr., Johns Hopkins University—1938
Jason Geiger, George Washington University—1945
Anson Roberts Hyde, George Washington University—1942
Richard Elwood Lukes, Marquette University—1943
Hubert Francis Manuzak, Hahnemann College—1942
Barbara Moulton, George Washington University—1944
Marshall M. Parks, St. Louis University—1943
Manson Bowers Pettit, Vanderbilt University—1928
Ruell Allen Sloan, Connecticut State College—1931
William Twenblatt, New York Medical College—1943
Milton F. Weingarten, New York Medical College—1941
Gerald Wessler, New York University—1941
Herman S. Wigodsky, Northwestern University—1941

For Associate Membership

Avelino Pessoa Cavalcanti, University of Brazil—1916
Stanton S. Hoechstetter, George Washington University—1928
Albert Roth, University of London—1943
Aaron Herbert Traum, University of California—1931

Nine New Life Members

Chapter II, Article IV, of the Constitution of the Society, reads as follows:

> Life members shall be active members who have been active members for a total of forty years. They shall have all of the privileges of active membership and shall be exempt from paying dues and assessments.

Our honor roll now numbers 85. The congratulations of the Society are extended to:

Seniority Number		*Date of Membership*
428	Charles W. Allen	April 3, 1907
431	William G. Young	April 3, 1907
433	Joseph A. Murphy	April 3, 1907
437	Prentiss Willson	April 3, 1907
438	William Earl Clark	April 3, 1907
443	Alfred C. Norcross	April 27, 1907
446	Joseph B. Bayne	May 1, 1907
450	John A. Talbot	October 2, 1907
456	J. Russell Verbrycke, Jr.	October 19, 1907

who have for forty years been on the roster, meeting all dues and assessments and lending their support to the Society by frequent attendance. Their status is now elevated to Life Membership.

WILLIAM ALEXANDER JACK, JR., M.D.
(1873–1947)

Dr. William A. Jack, Jr., surgeon, and a Life member of the Medical Society of the District of Columbia, died December 31, 1947, at his home, 3000 Connecticut Avenue, N. W., on his 74th birthday.

Dr. Jack was born in Newport, Rhode Island, December 31, 1873, the son of Dr. and Mrs. William A. Jack, and received his early education in Rhode Island and the District of Columbia. He graduated from Howard University Medical Department in 8196. From 1898 until 1942, when he retired from

A TRIBUTE TO DR. JACK

The facets of the character of Dr. Jack shone with rare brilliancy, for he had the three graces of human character—humility, simplicity, kindliness.

Believing that the highest function of life is to serve, the service he rendered was characterized by the highest efficiency, with humility and in the spirit of the Nazarene.

He had the human touch, the touch that makes all men kin. He recognized no class distinction. Whether one wore the Star of the Garter or the tattered covering of the pauper, he was the same to William A. Jack—his fellow man, to whom he stood ready to aid along the lines of his capabilities.

He was a brilliant surgeon, a loyal friend, a faithful husband, a devoted father.

E. Y. DAVIDSON, M.D.

active practice, he was a member of the staffs of Freedmen's and Sibley Memorial Hospitals.

He was elected a member of the Medical Association of the District of Columbia in 1901, and of the District Medical Society in 1902, and became a Life member, January 1, 1942. He was a Fellow of the American Medical Association, a charter member of the Washington Medical and Surgical Society, and President of the latter in 1912.

Surviving are his wife, Mrs. Edith Prevost Jack; two sons, Wales H. Jack, of Washington, and William A. Jack III, of Hampton, N. J.; and three sisters, Mrs. Luther E. Schreiver and Miss May D. Jack, of Washington, and Mrs. Walter Byrne of Elmira, N. Y.

JOHN ELWOOD KNIGHT, A.B., M.D.
(1883–1947)

Dr. John Elwood Knight, well known physician of Warrenton, Virginia, died suddenly in his office, December 30, 1947.

Born December 11, 1883, in Fredericksburg, Va., Dr. Knight graduated from Fredericksburg College in 1905 and from the Medical College of Virginia, Richmond, in 1908. The same year he moved to Bristersburg, in lower Fauquier County, where he practiced medicine until 1929, when he opened his practice in Warrenton. During the War he served as examining physician for Fauquier County draftees.

He was a director and staff member of Physicians Hospital, Warrenton. He had served on the staff of Fauquier County Hospital from its organization until it was closed a few years ago, and for many years was on the attending staffs of Mary Washington Hospital, Fredericksburg, Loudoun County Hospital, Winchester Hospital, and Doctors Hospital, Washington.

Dr. Knight had held various offices in his local medical society, the Fauquier County Medical Society, and had served as Vice President of both the Medical Society of Virginia and the Medical Society of Northern Virginia, Maryland and the District of Columbia. He became an Associate member of the Medical Society of the District of Columbia in 1943. He was a Fellow of the American Medical Association, a member of the Medical College of Virginia Alumni, and a member of many civic and social clubs in Warrenton.

He is survived by his wife, Mrs. Margaret Bird Knight; a son, John Landon Knight, Washington; two daughters, Mrs. Adrian Thayer and Miss Rosalie Lang Knight, Warrenton; a sister, Mrs. A. W. Atwood, Buffalo, N. Y.; and a brother, Vernon Knight, Richmond, Va.

Biliary Tract Disease—Behrend

(*Continued from page 80*)

exploration for stones which were not found. Subsequent choledochojejunostomy was necessary to relieve the obstruction. Cases of this type will become much more common if the common duct is explored routinely rather than for specific indications.

Whenever the common duct is opened I drain it for from 10 days to 1 year or more, depending on the operative findings. In every case a cholangiogram is performed about 10 days after operation to determine the presence of stones which may have been missed at operation. This examination also gives some information as to the functional status of the papilla of Vater.

SUMMARY

An effort has been made to clarify some of the controversial subjects pertaining to disease of the biliary tract. Obviously, it has not been possible to cover the entire scope of the subject in this paper. The common aids and diagnosis of biliary tract disease have been discussed. The indications for surgical intervention have been reviewed. I believe that operation should be performed without procrastination when the diagnosis of gallbladder disease is established. Advanced age need not deprive the patient of a chance for surgical relief, since the mortality has been lowered to reasonable limits. The treatment of acute cholecystitis and some technical features of biliary tract surgery have been briefly presented.

Esophageal Diseases—Schmidt

(*Continued from page 91*)

weight and avoid pressure on the anterior wall of the abdomen as much as possible. Belts and corsets should be discarded. If there is ulceration at the esophagogastric junction, a diet such as is prescribed for an ambulatory patient with ulcer, with some form of antacid, should be used. The symptoms caused by small sliding and paraesophageal hiatal hernias usually will be corrected by the aforementioned conservative methods. When symptoms persist and when the hernia is large, surgical repair will be necessary.

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Schizophrenia—Duval

(*Continued from page 97*)

schizophrenia in which specific channelizing of symptoms into one of the subgroups is not seen, and such diagnoses are fairly useful and quite descriptive in the early stages of the illness. Probably based on these facts and more specifically indicative of the acuteness of the schizophrenic process is the fact that prognosis in these two groups in our hospital is uniformly good. The prognosis of the two groups stands with the catatonic type.

Summary and Conclusion

A brief discussion of the clinical findings in schizophrenia has been attempted. The highlights of the history and progressive concepts of this condition have been given. Present-day classification, with description of subtypes together with the variable clinical findings, as well as some of the more important points in treatment, have been stressed. No complete outlines of ward management or the special therapies have been included. The literature on the subject of schizophrenia is enormous, research has been in progress for many years, and special treatments and approaches are still in progress, but this condition remains an enigma. Even in the face of such discouragement we must not lose our interest in eventually solving this problem, because dementia praecox (schizophrenia) is at present an enormous blight on our young adults.

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Music Which Anesthetizes—Observer

(*Continued from page 118*)

said, varied from appendectomies to tooth extractions. He asserted that he had tried the soporific effect of music on himself by "having an associate stick him with pins."

Describing the manner in which music is employed. Dr. Shane explained that the patient first breaths a mixture of equal parts of nitrous oxide and oxygen. This, he stated, creates a condition of numbness, but the patient is still conscious and converses rationally. He doesn't really "go out" until the earphones are placed on his head, and a soothing record is turned on. The dreamy melody continues while the surgeon works. Thirty seconds after the music is turned off, the patient is awake.

Dr. Shane's choice of music is interesting. The sweetly romantic "Poem" by Chausson, he said, is "100 per cent effective in inducing a deep sleep." Before discovering Chausson's composition, he found that Debussy's tender "Clair de Lune" produced "fairly satisfactory results." Lively marches, however, "don't work; neither do spirituals and other forms of religious music."

If as effective as Dr. Shane claims, surgery, aside from its serious aspects, should be entertaining to both patient and physician. But your Observer must admit to some skepticism. Not all patients will find "Poem" or "Clair de Lune" soothing. On the contrary, their tastes may well be offended. Sedation would be accomplished for them much more effectively by a Strauss waltz, or perhaps a bit of Grieg. As for your Observer, he prefers the melodious Tchaikovsky.

If Dr. Shane is serious about this music business, he should at least give the patient his choice. Perhaps a preoperative musical program would be worth a trial.

T. W.

Queries and Answers

(*Continued from page 119*)

of all patients interviewed at H. S. A. are rejected, of which nearly half go to private physicians. (See M. Ann. District of Columbia, 1947, **16,** 213)

H. S. A. is the agency which determines the worthiness of both inpatients and outpatients (except for emergency room treatment) to receive free medical care with financial assistance from the Community Chest.

National Heart Week

(*Continued from page 121*)

275.3 for 1946. Cancer, second on the list, showed a decrease from 147.9 to 146.5.

Membership in the American Heart Association is open to anyone interested in its aims and objectives. Dues are $2.50 per annum. Members of all local affiliated Heart Associations automatically become members of the A.H.A. Journal memberships in A.H.A. are $10.00 per annum and include a subscription to the *American Heart Journal* in addition to other benefits.

Dr. J. Ross Veal of Washington is a member of the Board of Directors of A.H.A.

Hospital News—York

(*Continued from page 122*)

Saint Elizabeths Hospital for one year's resident training in psychiatry, reported for duty, November 1, 1947.

As of October 1, 1947, the Hospital has inaugurated a chest X-ray survey, with a 70 mm. film X-ray apparatus, of all patients and employees. It is planned to carry on this work as a continuous process so that each patient and employee will receive a chest X-ray every six to eight months. Hereafter, all newly appointed employees and newly admitted patients will receive chest X-rays promptly.

Karl H. York

Washington Physicians of Yesterday—Mackall III

(*Continued from page 120*)

June 13, 1906, the encomiums expressed indicate the esteem in which he was held for his ability and eminence and the dignity and charm of his personality. There are members of the Society still living who will appreciatively remember the worth and kindliness of his nature.

Louis Mackall III, son of Louis II, was born November 25, 1867, in Georgetown. He was graduated as M.D. by the Columbian University Medical School in 1880; afterward he studied abroad in Paris, Berlin and London. He was one of the leading practitioners of medicine in Georgetown and vicinity from 1890. He was Clinical Professor of Medicine in George Washington University, 1913–16. He was a member of the Staff of Garfield Hospital from 1913 to 1930 and President thereof from 1925; and member of the Consulting Staff of Georgetown University Hospital. He was an active member and officer of numerous local and general medical and other organizations, among which may be especially mentioned the Clinico-Pathological Society, of which he was a Past President. He was particularly active in committee service in the District of Columbia Medical Association and Society, having been President of the former, 1907–08, and of the latter, 1910. He rendered useful service to his community not only in his professional capacity, but in many other ways, having been Vestryman of Christ Church, Trustee of the Peabody Library, Director of Oak Hill Cemetery, Director of the Federal-American National Bank, President for many years of the Georgetown Assembly, member of the Washington Board of Trade, of the Cosmos Club, of the Chevy Chase Club, and of the Washington Country Club. He was memorialized in "Who's Who in America," and in having one of the local minor medical societies established and named in his honor. He married Lucy Haw Matthews, November 15, 1899, and was survived by his widow and five children. He died July 27, 1930, having won high esteem for his achievements and personality and left a fine record for professional and civic service to his community.

John B. Nichols, M.D.

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A DISCUSSION OF THE CLINICAL APPLICATION OF TITERED OR QUANTITATIVE SEROLOGIC TESTS FOR SYPHILIS

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THE introduction of rapid treatment therapy for early syphilis has shown the value of "quantitating" or "titering" of blood sera. Sufficient experience in the performance and evaluation of titered tests has been accumulated in the past few years from which some general conclusions may be drawn. The bulk of the information has been obtained from patients treated for early syphilis, but a fair amount of information has also been derived from all stages of syphilis. From this information certain generalizations about the formation and behavior of reagin in the several stages of syphilis may be advanced.

Quantitative tests of blood and spinal fluid for syphilis depend upon the use of a series of dilutions of serum or spinal fluid. From these dilutions the approximate strength (the titer) can be expressed.

It is pertinent to point out that variations in the titer will be reported according to the technic and specific type of test used in the various laboratories. In addition, because of technical difficulties, such as changes in temperature, physical changes in reagents, variations in readings, etc., reports may vary from day to day in one or more tubes. Variations between laboratories occur because of the type of test used and also because the sensitivity of the antigen employed is not constant. Titers reported from a complement-fixation test tend to be on a lower order than those reported from a flocculation test. These variations do not detract from the usefulness of quantitative tests if it is understood that the titer of a STS (hereinafter used for serologic test for syphilis) varies according to (1) the laboratory reporting, (2) the use of a complement-fixation or a flocculation test, and (3) changes of dilution of more than one tube for a significant determination.

To elaborate the first point, that of the laboratory reporting: Laboratory A may be using an antigen which gives a sensitivity of 80 per cent, whereas laboratory B may be using an antigen which gives a sensitivity of 87 per cent. Thus, A may report a titer of 8 units and B a titer of 16 units on the same sample of serum. This will not mean that either report is incorrect. It will, however, indicate the difference of sensitivity of the tests used in the two laboratories. It is apparent, therefore, that in order to obtain comparative results, all tests evaluating blood titers on the same patient should be made in one laboratory.

In considering the second point, the use of a complement-fixation or a flocculation test: National evaluations of the various state and private laboratories of serologic tests for syphilis indicate that the sensitivity of the flocculation tests have averaged 5 to 7 per cent higher than the complement-fixation test.

In considering the third point, that of variation of one tube dilution for significant determination: Unless the reports from one laboratory are notably erratic there will not be a variation in more than one tube dilution from day to day so that it only becomes necessary to discount variations upward or downward of more than one dilution. A change in pattern, either increase or decrease, should not be predicated on one test alone. One or more confirmatory tests performed at intervals, suited to the urgency of the diagnosis or evaluation under consideration, should be made. In determining the diagnosis of an acute infectious lesion, these intervals might be 1 day in length, or, when evaluating post-treatment progress, these intervals might be a week or a month.

Determination of Units

The laboratory may report the titered STS in two ways. In the first instance the report may be given in tube dilution directly. In the second instance the report may be given in units. The dilutions may be further expressed by an arithmetic dilution, as for example, the quantitative Kahn; or by a geometric dilution, as the quantitative Eagle. The following table compares the arithmetic and geometric readings of quantitative STS and their expression in units:

Dilution Ratio Quantitative STS

Example:

Kahn Quantitative		Eagle Quantitative	
Arithmetic dilution	Units	Geometric progression dilution	Units
1 (undiluted)	4	1 (undiluted)	4
1 to 5	20	1 to 2	8
1 to 10	40	1 to 4	16
1 to 20	80	1 to 8	32
1 to 30	120	1 to 16	64
1 to 40	160	1 to 32	128
1 to 50	200	1 to 64	256
1 to 60	240	1 to 124	512
etc.	etc.	etc.	etc.

It will be noted that units are determined according to the formula S = 4D, in which S is the serum potency in units and D, the dilution, is the highest dilution ratio giving a positive 4 plus reaction. As a further refinement in tests below 4 plus, tests of 3 plus, 2 plus and 1 plus are likewise reported as additions of S = 3D, S = 2D, S = D, respectively.

It is desirable to titer all tests to complete negativity. Occasionally a zone reaction occurs, characterized in early dilutions by a weakly positive reaction which may become strongly positive on further dilutions, or which may be weakly positive for several dilutions. Quantitative titers as high as 65,316 units or 26,264 dilutions have been reported by the D. C. Serological Laboratory. The significance of this ratio of dilutions is not known except that usually, in addition to syphilis, some concomitant infection is present.

Reagin Reactions

It is well known that reagin is not detectable in the blood of patients with syphilis before the fifth to eighth week after infection. After it becomes detectable it increases rapidly until it reaches a peak during the secondary stage, and it then usually decreases until a fairly stable level is established in the latent stage. Titers of over 100 are the rule in secondary syphilis. In late syphilis it is usual to find titers of less than 100, although there may be marked exceptions to this rule.

Reversibility of the STS to negativity varies greatly. In patients with secondary syphilis, very high titers of over 500 may become negative within a few months following rapid therapy. Much lower titers found in patients with late syphilis usually require years to become negative. In some cases the STS may never become negative but may remain positive for life.

Individuals vary greatly in the amount of reagin formed from the stimulus of a syphilitic infection. A rise in titer is not unusual if rapid therapy is instituted while the titer is rising in early syphilis. If, on the other hand, the titer has reached its peak, there may be a slight fall in the amount of reagin immediately following treatment. In general, it may be said that the longer the patient has had syphilis, the longer it takes for the STS to become negative even though treatment may have been successful. However, this rule is subject to considerable variation.

Quantitative STS in Early Syphilis

In both seropositive primary and secondary syphilis there are wide variations in the time required for the STS to become negative after treatment. Variations are more marked among patients with secondary syphilis. However, slight evidence exists that the duration of the lesions, as given by the history, or the height of the STS titer at the time of treatment, influences the time required for an STS to become negative.

Within a month after treatment of primary and secondary syphilis with penicillin or intensive arsenic therapy, the STS titer falls rapidly. In adequately treated early infectious syphilis, unless a relapse has occurred, the STS falls to negativity in approximately 75 per cent of cases within the first 3 months.

Patients with primary and secondary syphilis in whom negativity of the STS has not resulted fall into three general categories: (1) treatment failures; (2) titer decrease, with increase after varying time periods; and (3) titer decreases to 16 units or less, but not complete negativity. In the first category, that of the treatment failures, the STS titer remains above 16 units or a serum dilution of 1 to 4 by a flocculation test. If no decrease in titer is evident 6 months after completion of therapy, the patient should be retreated. In the second category are those patients whose titer falls to a low level within the usual 3 to 6 months' period, but which, after reaching a relatively low or lower level than that present at the completion of therapy, again begins to rise. After the establishment of a rising titer pattern, the patients are candidates for retreatment. The third category comprises patients whose titers fall to a low level of 16 units or less but not to negativity. There is sufficient evidence available from cases of this type that have been followed for a period of 3 or more years to state definitely that the titers of 16 units or below are not treatment failures. In the majority of these cases the titer will eventually reach negativity, and none of the patients observed at the Health Department Rapid Treatment Center have shown development of skin lesions, central nervous system or other visceral syphilitic disease. Thomas[1] reaches the same conclusion in patients treated at the Bellevue Rapid Treatment Center.

Two general serologic patterns become evident in the group of patients whose blood serum falls to negativity. The STS remains persistently negative in the first pattern; the STS in the second pattern, after reaching negativity, and after remaining negative for varying periods of time (from a few months to years) again becomes positive and the titer rises. The first pattern is by far the largest group under present therapy, and, categorically from all the evidence available from patients treated in the Rapid Treatment Center, it can be said that these patients are cured. In the second pattern most patients present definite evidence of reinfection, a new primary lesion. Unfortunately, in some few patients, after the STS has been negative for as long as 6 months and no evidence of a primary lesion can be found, a rise in titer occurs and a full-blown relapse develops if the patient is not re-treated. Whether or not this is actually a relapse from some focus of spirochetes which has not been eradicated by therapy or an actual reinfection without the development of a chancre is a matter of great concern to the clinician or syphilologist evaluating therapeutic results. Although it has been shown by animal and human experimentation that such a paradox of reinfection without the appearance of a chancre can occur, not enough evidence has yet been adduced to conclusively demonstrate that, in man, a relapse has not occurred. Beerman[2] concludes "since we have no absolute criteria of biologic cure, nor adequate means to identify asymptomatic infections in man, it is possible that reinfections may take place on a scale larger than hitherto suspected." Needless to say, these patients must be re-treated.

Quantitative STS in Latent Syphilis

As defined, latent syphilis is clinically asymptomatic and the diagnosis is made solely by means of a positive STS and/or history. The spinal fluid must have been examined and found negative. The actual duration of the disease will often be doubtful so that an evaluation analysis is difficult.

Thomas[1] found that as a rule the longer a patient has had latent syphilis, the longer it takes for the STS to become negative after rapid treatment. In 65 per cent of the cases of patients with early latent syphilis of less than 6 months' duration, the STS will become negative within 1 year following treatment. In patients having syphilis of from 6 months' to 1 year's duration, about 15 per cent of the cases will attain a negative STS 1 year after treatment. In patients with syphilis of more than 1 year's duration, only an occasional negative STS will be noted 1 year after treatment.

According to our present knowledge of test procedures and results, the quantitative STS as a guide to treatment in latent syphilis is less valuable than a quantitative STS in early syphilis. Continued observation and analysis will crystallize interpretations of results, but at the present time experience is purely empirical. All that can be said is that, if rises occur in successive STS titers, confirmed by repeated tests, the need for further antisyphilitic treatment is indicated. However, as long as the titer shows even the slightest gradual downward trend, it is probable that no further treatment is necessary.

It is generally known that late latent and benign late syphilis treated by the older standard methods responded well to lesser amounts of therapy than early syphilis. A minimum of 20 arsenicals and 20 heavy metals suffices to protect a patient from the disease and the development of late symptoms. Although observations have not yet been recorded for a long period of time, preliminary evidence on the immediate effects of rapid treatment indicates that the amount of therapy necessary for late latent and benign late stages is not more than that required for early syphilis. The titered STS, together with clinical observations, may prove valuable in the final determination of the effectiveness of rapid treatment therapy to protect a patient from the progressive stages of syphilis. As yet many patients have not progressed to serologic negativity, but it is known from experience with older methods of treatment that serologic negativity is not necessary to determine a successful outcome of treatment and that more harm than good was done in attempting to reverse a positive STS to negativity by continuing treatment for years.[3, 4]

If, after a longer period of observation, it is proven that the present schedules of rapid therapy are adequate to prevent clinical progression and development of late symptoms in late latent and benign late syphilis, then the value of serologic negativity in late latent and late syphilis as determined by STS titers can be discounted.

Quantitative STS in Congenital Syphilis

The quantitative STS has proven a most valuable test in evaluating the presence or absence of syphilitic infection in infants born to mothers who have syphilis in any stage. Patients with both early and latent syphilis, in whom an appreciable quantity of reagin is present in the blood at delivery, may transmit reagin to the infant by way of the placental circulation. Depending upon previous treatment of the mother and upon the stage of the disease in the mother, the infant may or may not have syphilis.

The presence of reagin alone in the infant's blood does not establish the diagnosis of syphilis. Infants without syphilitic infection who show reagin in their blood usually have a titer which is lower than that of the mother at the time of delivery. Their STS will fall to negativity within 3 months after delivery. Infants who have syphilis at the time of delivery do not show a decrease in titer but rather an increase, which is evident within a few weeks. Infants with manifest active syphilis at the time of birth, with skin and mucous membrane lesions, rhagades, etc., present no problem in diagnosis and are candidates for immediate treatment. But infants in whom no manifest symptoms present themselves become important diagnostic problems if they are not to be stigmatized with an unwarranted diagnosis of syphilis and subjected to unnecessary treatment.

In addition to the usual clinical observations and roentgenograms of the long bones during the critical diagnostic period, birth to 3 months, the blood should be quantitatively titered at intervals of 2 weeks.

If syphilis is not present in the infant, clinical observations and roentgenograms will remain negative and the STS titer will fall to negativity within 3 months. If syphilis is present, not only may clinical and roentgenographic bone changes be noted, but the STS titer will show a pattern of increasing titer. Thus, the diagnosis can be incontestably established before treatment is instituted.

QUANTITATIVE STS IN PREGNANCY

The management of prenatal syphilis, particularly in the decision to treat, re-treat or withhold treatment, is based on the serologic pattern as determined by titered STS.

The patient who has received adequate treatment prior to the current pregnancy and whose STS is negative, or who maintains a titer of not more than 16 units as determined by monthly tests, may be allowed to go to term without further treatment. If the titer is above 16 units or shows any rise during observation, re-treatment with penicillin is indicated.

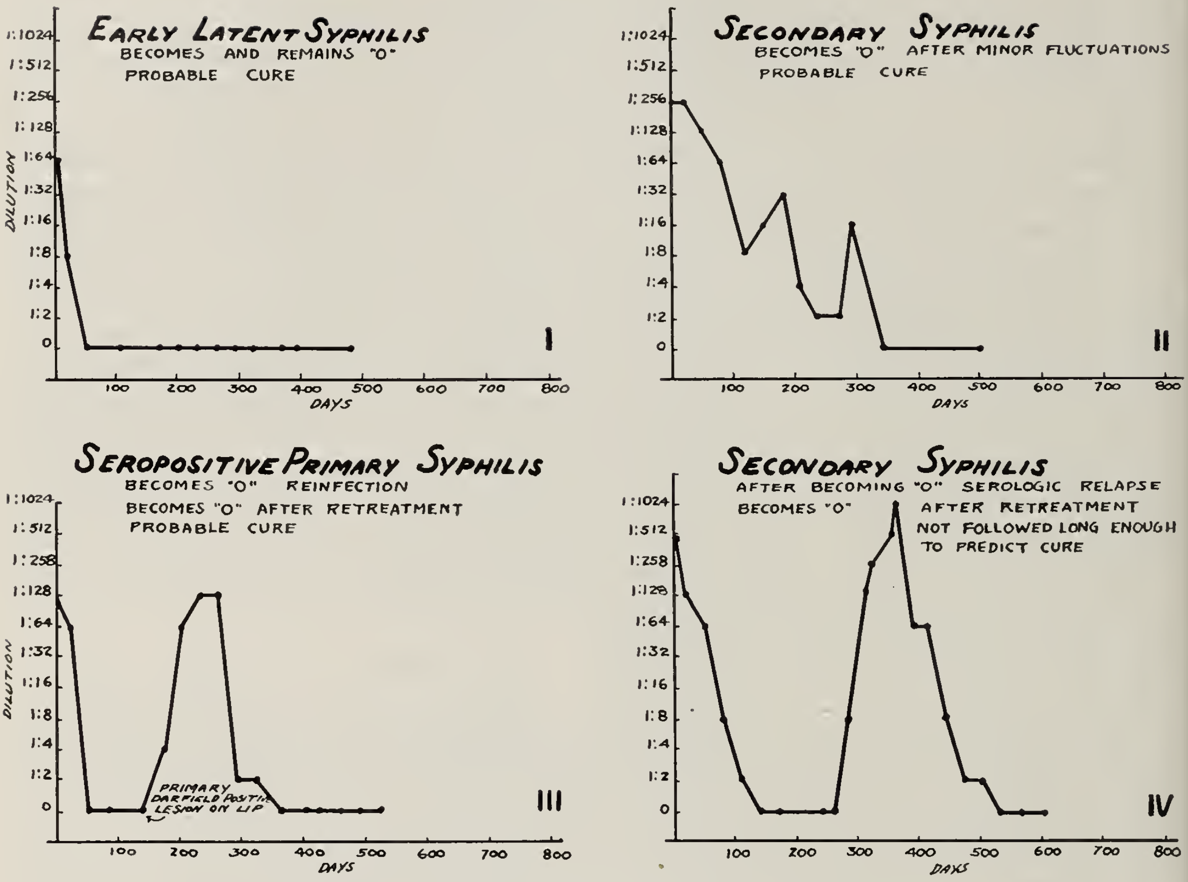
The patient who has received penicillin for syphilis during her current pregnancy should be followed by monthly titered tests. In the majority of cases the titer will show a favorable response, rapid decrease in early syphilis and a slow fall in latent syphilis. If the titer remains high, or if, after showing a falling pattern, there is any rise in titer over preceding tests, prompt re-treatment is indicated.

QUANTITATIVE STS IN NEUROSYPHILIS

Thomas[1] reports on the value of the STS in neurosyphilis. He found that there was no correlation between titers of the blood and of the spinal fluid. He feels that the persistence of increased cells and protein is a better guide to the activity of the syphilitic process in the central nervous system than are quantitative spinal tests. The latter, however, are helpful in observing patients after treatment. As in the blood, failure of the titer to fall, or a rise in the titer when the titer has fallen after treatment, is a bad prognostic sign forecasting a relapse.

TYPES OF TITERED CURVES COMMONLY SEEN

In figures 1 and 2 are shown 8 types (cases I to VIII) of individual case response to penicillin treatment, and 2 types (cases VIII and IX) of diagnostic serologic titers in infants. In adults, serial serologic results are shown at approximately monthly intervals. In infants, serologic results are shown at approximately 2-week intervals. This interval of testing seems definitely indicated in order to establish, as early as possible, impending clinical relapse and failure of



EARLY LATENT SYPHILIS

BECOMES AND REMAINS "O" PROBABLE CURE

SECONDARY SYPHILIS

BECOMES "O" AFTER MINOR FLUCTUATIONS PROBABLE CURE

SEROPOSITIVE PRIMARY SYPHILIS

BECOMES "O" REINFECTION BECOMES "O" AFTER RETREATMENT PROBABLE CURE

SECONDARY SYPHILIS

AFTER BECOMING "O" SEROLOGIC RELAPSE BECOMES "O" AFTER RETREATMENT NOT FOLLOWED LONG ENOUGH TO PREDICT CURE

Fig. 1. Types of titered serologic curves for syphilis commonly seen

cure, or, in the case of infants, diagnosis. The majority of observed relapses occur from the fourth to the ninth month after treatment. Curves I, II and VIII represent completely satisfactory serologic progress, and probably indicate "cure." Curve VII represents a satisfactory serologic response as far as followed. Further observation of the results from penicillin treatment of late latent syphilis is, of course, indicated. Continued freedom from clinical progression of the disease, in the knowledge of a satisfactory outcome from the older methods of arsenical treatment classified as "maximum benefit," can be prognosticated even though serologic negativity is not attained. Curve III represents a reinfection. This type of case is more frequently seen after penicillin treatment than under arsenical treatment. After achieving clinical and serologic negativity, the patient returns with a primary, darkfield positive lesion, rising serologic titer, and, in the case cited, a proven exposure to a patient with early infectious syphilis. Re-treatment of the same order as for a new infection is indicated. Curve IV represents a serologic relapse. This phenomenon indicates, and usually precedes, clinical relapse, the rising trend in serologic titer being noted (if observations are made frequently enough) a few days to several months before the appearance of clinical relapse. The fact of serologic relapse must always be verified on 2 or 3 repetitions of the test in order to confirm the rising trend and to rule out technical error. If confirmed, this type of reaction is an indication for re-treatment.

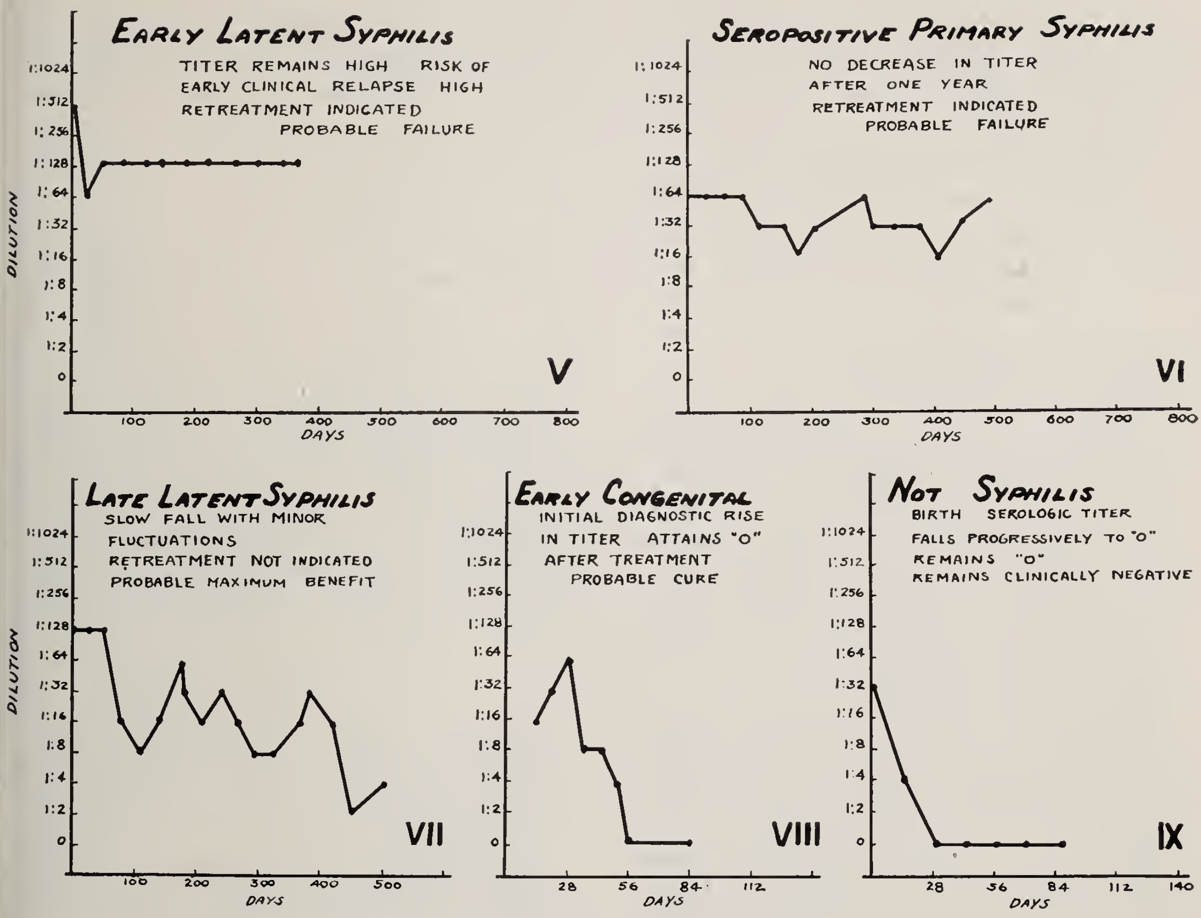


FIG. 2. Types of titered serologic curves for syphilis commonly seen

Curves V and VI represent an initial failure of penicillin treatment. There is little or no serologic response, and in each case the risk of clinical relapse is high. Such cases as these should be re-treated after 6 months of observation, even if clinical relapse has not occurred. Curves VIII and IX represent the 2 types of response seen in infants. Curve VIII represents the rising trend in serologic titer when syphilitic infection has been transmitted. After birth, serologic testing at intervals of 2 weeks establishes a rising pattern. Treatment should be instituted as soon as this type of reaction is established and confirmed. Case IX represents the infant who has not been infected but to whom reagin in the mother's blood has been transmitted. Serologic titer in these cases invariably falls to negativity within a period of 3 months.

CONCLUSIONS

1. Quantitative serologic tests for syphilis (STS) are of value in the management of treated syphilis.

2. Patients treated for primary or secondary syphilis with negative spinal fluid, negative STS, or a persistently low blood STS titer of less than a flocculation dilution of 1 to 4 (16 units) or a complement-fixation dilution of 1 to 2 (8 units) for more than 1 year after rapid treatment for syphilis require no further therapy unless marked rises in titer occur.

3. Patients treated for primary or secondary syphilis who continue to have complement-

fixation titers of 1 to 2 (8 units) or greater, or quantitative flocculation tests of 1 to 4 (16 units) or greater, 1 year after rapid therapy, should be re-treated.

4. Patients given rapid treatment for early latent syphilis of less than 6 months' duration may be expected, in the majority of cases, to become seronegative within 1 year after treatment. The persistence for more than 1 year of low STS titers is not an indication for further treatment in such patients.

5. Patients with latent syphilis of more than 6 months' duration as a rule require more than 1 year to become completely seronegative. In general, the longer the duration of latent syphilis, the longer the time required for the STS to become negative. Re-treatment is not indicated in such patients unless the follow-up STS titers show definite and sustained rises from previous levels.

6. The aim of treatment in late latent or late syphilis in general is not to obtain negative STS but to prevent further progress of the disease. Quantitative STS are valuable in the follow-up of such treated patients. If marked sustained rises in STS titers occur, further treatment is indicated. Present knowledge indicates that patients who continue to have gradual drops in titers over years require no further treatment.

7. Patients after rapid treatment require monthly or bi-monthly STS during pregnancy. If the titer remains high or shows a rising titer pattern they should be re-treated.

8. Titered bi-monthly STS is a valuable adjunct in determining the absence or presence of congenital syphilis. In the absence of syphilitic infection the STS reaches negativity before 3 months after birth. If syphilis is present, the titer shows a rising pattern.

9. In syphilis of the central nervous system the spinal fluid findings are the only reliable guides to treatment. The presence of increased cells in the spinal fluid 6 months after treatment, or a definite rise in spinal fluid complement-fixation titers at any time following treatment, indicates the need for additional treatment.

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THE FALSE-POSITIVE SEROLOGIC TEST

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THERE are few laboratory procedures whose inevitable margin of error entails more social and personal suffering than the Wassermann reaction. Whatever savors of technical inexperience, of the injudicious and uncritical temperament, of personal motive and purely commercial interest, of haste, inaccuracy, impressionism and pigheadedness has no place in its performance."—Stokes, Beerman and Ingraham.[1]

Since the presentation by Wassermann[2] of the familiar complement-fixation test the serologic diagnosis of syphilis has become a routine procedure. The flocculation, precipitation and verification tests added by numerous investigators[3–11] have also contributed much to our knowledge and ability to make a laboratory diagnosis of syphilis.[12–20]

The recognition that the quantitative serologic tests[21, 22] for syphilis are assuming an increasing importance has led us to the realization that some effort should be made to clarify the complexities of the false-positive test. This is necessary in order to overcome the "serological jitters" (Stokes) and maze of conflicting opinions in this field.

Different phases of the subject of false-positive serologic tests have been discussed by Stokes et al,[23] Beerman,[24] Moore,[25, 26] Kolmer,[27, 28] Kahn,[29–33] Rein,[34] and others,[35–86] to whom acknowledgement is made.

As has been pointed out previously, the tests, either complement-fixation, flocculation, or otherwise, are not 100 per cent specific for syphilis. No laboratory test will exclude syphilis. Helpful as it may be, no serologic test will replace the examination and estimation of the patient by the clinician, especially one versed in the complexities of a disease of so protean manifestations.

It is our aim to classify the various types of false-positive serologic tests. We would not, however, minimize the positive test, especially the repeated positive test, which we believe to be of the highest diagnostic significance when done meticulously in a competent laboratory.

We have divided the false-positive serologic types into those occurring in the blood and those which occur in the spinal fluid, plus a clinical classification into (a) simple (obvious) and (b) complicated (obscure), with examples of each.

We would reëmphasize the importance of careful collection, labeling, and handling of both blood and spinal-fluid specimens. It seems quite unfair to attach blame to competent laboratories and technicians who receive blood or spinal fluid in dirty containers, mislabeled tubes, or specimens overheated.

We have devised the following classification to cover the false-positive test:

SEROLOGIC CLASSIFICATION

I. Blood Serum False Positive
   1. Those due to technical errors
   2. The transplacental (newborn) false positive
   3. The clinical paradoxical false positive (so-called Wassermann-fast)
   4. The general biologic false positive:

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  - a) Infectious diseases (other than viral and spirochetal)
  - b) Virus diseases
  - c) Miscellaneous conditions
  - d) Occasional and rare diseases
  - e) Spirochetal diseases

II. Spinal-fluid False Positives

Clinical Classification

A. Simple or Obvious False Positive

B. Complicated or Obscure False Positive

BLOOD SERUM FALSE POSITIVES

Technical Errors

These range in carelessness in labeling to gross errors of titration. The improper numbering and labeling of tubes and names has caused many mistakes, mere clerical errors which a carefully followed systematized method would have avoided. Eternal vigilance is the price of safety in both titration of antigen and reading of results. Haste is sure to be rewarded by errors in technic. The careful handling of tubes, pipettes, racks, and all the physical properties in the performance of the tests is essential or an increase in false positives is sure to result.

Example: Mr. K., white male, aged 32, had a premarital STS reported positive; repetition in another laboratory next day was reported negative; repeated 1 week and 1 month later, it was also negative. Examination and history were negative. Follow-up 2 months later was negative. Impression: laboratory error.

Transplacental False Positive

We have used this designation, rather than hereditary, to denote the false positive in the newborn. This happens most frequently in the treated mother. In spite of the fact that the pregnant mother has been adequately treated, enough reagin may pass through the placenta to give rise to a positive serologic test in the newborn. This false positive in the infant varies with a number of factors: the time of treatment in the pregnancy, amount of treatment before or after the fifth month, and the serologic titer of the mother's blood. This false positive is usually very weakly positive when titrated quantitatively and is of a transient nature as a rule.

Example 1: The patient was baby K, born June 4, 1945. The mother was treated with 6 million units of penicillin during the eighth month of pregnancy. The mother's blood was serologically positive, 4 Kahn units at the time of delivery.

The blood STS* on the newborn at the fifth day was positive with a titer of 8 Kahn units. At 8 weeks, without treatment, the blood STS on baby K was negative. The spinal fluid was negative. X-ray films showed no evidence of syphilis, and follow-up to date has not revealed any evidence of disease.

Example 2: The baby, McC, was born on March 1, 1946. The mother was treated at 7½ months with 6 million units of sodium penicillin while in the hospital. She became serologically negative 1 month after delivery. The baby had positive serology at birth. At 1 month it was serologically negative, both blood and spinal fluid. No X-ray changes were noted in the long bones. The baby was not treated.

The practice of taking "cord" Wassermann's should be abandoned.

Some comments of MacKee and Cipollaro[87] are worth repeating:

"The value of serologic diagnosis by means of the cord blood has been seriously questioned. Although most authorities agree that the reagin in the mother's blood may be transmitted through the placenta and appear for a variable period (ten days to two months) in both the cord blood and the infant's blood even in the absence of syphilis (syphilotoxemia-Fildes'), there are others who erroneously depend implicitly on the cord blood for diagnosis. The value of the cord blood may be summarized by saying that a positive serologic reaction of it is not indicative of syphilis in a variable number of the cases, and a negative serologic reaction fails to rule out syphilis in about 40 per cent of the cases. A quotation from Faber and Black will serve to clarify this confusing conception:

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* STS stands for serologic test or tests for syphilis.

" 'Fildes, in 1915, after studying 1,015 infants in a clinic in East London with special attention to the question of syphilis, concluded: "The Wassermann reaction obtained with blood from the placental end of the cord is not diagnostic of syphilis in the infant but of syphilis in the mother." He further stated: "The phenomenon does not depend on the use of blood from the umbilical cord but is also met with when the blood is obtained direct from the infant." Fildes' observation that initially positive Wassermann reactions in infants frequently become negative without treatment and that the infants are not actually infected, has been confirmed by Cruickshank and others, most recently and convincingly by Dunham. It is nevertheless common practice to consider a positive Wassermann reaction in a newborn infant as presumptive evidence of syphilis and to institute treatment on that basis alone. Obviously such practice submits the infant to the not inconsiderable risks of . . . therapy. . . .'

"Recently the use of successive quantitative serologic tests on infants' blood (Wassermann, Kahn and Kline) has been adapted to the problem of the early and accurate serologic diagnosis of infantile congenital syphilis. Various results may be anticipated from these tests. The intensity of the infant's titer is compared with the serologic status of the mother. If the cord blood test titer is significantly greater than that of the mother's blood, the child is probably syphilitic (rare). Rising amounts of serum reagin in the asymptomatic, physically normal infant are usually interpreted as indicative of syphilis. Because occasionally a syphilitic infant may exhibit initially a decreasing titer and the increase in titer in such an infant may not occur until 1 or 2 months after birth, it is obvious that the serologic follow-up of an infant should consist of repeated serologic study over a period of at least 6 months."

PARODOXICAL FALSE POSITIVE

This designation has been adopted for those cases which have been called for years past the "Wassermann-fast" cases. From time immemorial patients have been followed who were adequately, yea, more than adequately, treated and whose blood STS remained positive. Probably much overtreatment has been administered to the unsuspecting patient, and it astonishes one to think of the vast quantities of arsenicals and heavy metals some of these patients have endured in order to obtain unnecessarily the reversal of an STS titer so low as to be insignificant when followed by repeated negative examinations, clinical as well as serologic, X-ray examination, etc. Many patients after years of treatment and frequently overtreatment will have a titer of 1 to 4 or 5 units which will result in a qualitative positive STS of not the slightest clinical significance. Thus the paradox of the positive STS in the fully treated case which has been followed and carefully watched should be fully appreciated, and a policy of watchful waiting adopted. It seems unnecessary to add that this information should always be coupled with the knowledge that such a patient's spinal fluid is and remains negative.

Example: A white male, aged 38, had a routine examination for a flying license which disclosed a positive serology. He was referred by an airline physician. Investigation revealed that he had had over 300 injections of arsenic and bismuth in a 5-year period in the hope of eradicating a persistently positive serologic test. The blood showed a 1-plus Kahn and a quantitative titer of from 0 to 3 units on several examinations extending over a 6 months' period. Physical examination and the spinal fluid were negative; examination of the great vessels was negative. Intensive investigation of his history, etc., makes the diagnosis of syphilis extremely doubtful. The wife and the 2 children are serologically negative, living and well. Only a robust young man probably could have endured so much treatment without mishap.

GENERAL BIOLOGIC FALSE POSITIVE OR NONSPECIFIC FALSE POSITIVE

Depending upon the manipulation of the test used, everyone may have a complete, partial, or negative complement-fixation precipitation or flocculation test. The tests are so arranged, however, that only those showing syphilitic reagin become positive and those lacking it negative. The exact mechanism of the process whereby the titer of the reagin becomes sufficient to become positive is poorly understood. Presumably it has to do with the globulin, pseudoglobulin, euglobulin, and albumin fractions. It is therefore theoretically possible for an individual to have such an arrangement and to show a persistently false-positive test having no relationship to syphilis or any other disease. These we have considered the biologic false positive. It is not usual for such a condition to be persistent; rather, it is the rule for it to be evanescent. The titer of the reagin may be very low, intermediate, or very high, and may go up or down; but the absence of persistence and the absence of signs and symptoms of syphilis usually make the outcome plain.

It should be pointed out at this time that the titer of the reagin bears no relationship to the severity or to the mildness of a case of syphilis under consideration. These patients frequently have no demonstrable disease.

It seems theoretically possible that certain individuals with minor infections have an elevation of titer, as in certain respiratory diseases, vaccinia, etc., which cause them to show positive tests. These are nonspecific false positives.

TABLE 1

General Biologic False Positive

INFECTIOUS DISEASES	VIRUS DISEASES	MISCELLANEOUS CONDITIONS	RARE CONDITIONS	SPIROCHETAL DISEASES
1. Leprosy—70%	1. Vaccinia—25%	1. Malignancy—10–20%	1. Pneumonia (bacillary)	1. Weil's disease—less than 1%
2. Malaria—35% (Robinson) 100% at some time in disease	2. Lymphogranuloma venereum—25%	2. Erythema nodosum—7%	2. Fever—from any cause	2. Yaws—100%
3. Infectious mononucleosis—18% (Bernstein)		3. Jaundice—2–4%	3. Acute lupus erythematous	3. Bejel—100%
4. Tularemia—less than 1%		4. Pregnancy—2%	4. Sarcoidosis	4. Pinta—100%
5. Infectious hepatitis (occasional)			5. Chickenpox	
			6. Measles	
			7. Virus pneumonia	
			8. Leukemia	
			9. Alcohol, ether, paraldehyde poisoning	
			10. Use of tetanus antitoxin and toxoid	
			11. Typhoid inoculation and other immunizing procedures	
			12. Rat-bite fever	
			13. Haverhill fever	
			14. Menstruation—probably does not occur	
			15. Familial occurrence	

The general biologic false positive we consider in 5 parts, as shown in table 1.

THE SPINAL-FLUID FALSE POSITIVE

The false-positive reaction of the spinal fluid occurs less frequently than that of the blood for obvious reasons. Not so many tests are performed numerically, there is more care in handling, and more care in technic is probably used. It should be noted here that the presence of red blood cells in any appreciable number in the specimen of spinal fluid renders the tests extremely unreliable unless special and elaborate methods for their removal are followed. For accuracy, spinal-fluid specimens should not contain any red blood cells.

The most frequent diseases which cause false-positive reports of spinal fluid are those leading to pleocytosis of the fluid, namely: (1) meningitis, (2) brain tumor, or other space-restricting lesions, and (3) tuberculosis. If so reported in these cases the spinal fluid test should be repeated and search made for the possible source of error. Less frequently a spinal fluid will be falsely positive in various encephalopathies, and in multiple sclerosis, but these are the source of relatively little confusion.

Technical errors on spinal fluids are more easily checked than on samples of blood, because the cell count, protein, and globulin tests all aid in arriving at a conclusion of false positive. It is illogical to receive a positive test in the presence of normal cell count, normal amount of protein, and negative colloidal gold curve, and one should be extremely suspicious of such reports, except in previously treated patients.

Example: Mr. C. F. W., aged 23, was a case of false-positive spinal fluid occurring in a metastatic brain tumor. He was admitted to the hospital with the obvious signs of a brain tumor which was proven on ventriculography and later by autopsy. It was a melanotic carcinoma, and the patient gave a history of having had a pigmented mole removed a year previously. His blood serology was completely negative, and his spinal fluid showed a strongly positive Kahn, a negative Kolmer, a cell count of 18 (all lymphocytes), no increase in globulin, and a completely flat colloid gold curve. Diagnosis: nonsyphilitic false-positive spinal fluid.

Clinical Classification

The simple or obvious false positive. Cases in this group may comprise the well or the sick, such as the healthy adolescent who turns up with a false positive and whose clinical, social, and sexual backgrounds are sufficient to exclude the diagnosis; and contrariwise, the patient with a full-blown case of malaria with a high fever whose blood is teeming with parasites may have a false positive of any titer. Pneumonias likewise fall in this classification. These false positives are of varying titers, usually low. The jaundiced, the recently vaccinated, and those with infectious mononucleosis are representative of this group. The false-positive test is usually transient and does not persist longer than a few days or weeks. Repetition of the tests at suitable intervals, quantitation, and reëxamination of the patient clarify the situation. The false-positive test should not be accepted and usually should not be imparted to the patient, since it has little or no bearing upon the condition and is sure to upset the patient quite thoroughly.

Example: J. G., a white schoolgirl aged 15 years, in the course of a general examination had a positive STS. There was no history of contact, and the family and social histories were negative. The patient was found to be a virgin on examination. Repetition of the test revealed normal findings, a battery of tests being used. The positive STS was probably a laboratory error. No evidence at any time of syphilis or other disease was revealed.

The complicated or obscure false positive. These are somewhat rare, but are a source of a great deal of worry and require studies of the most penetrating nature. Reëxamination of the blood serum with a battery of tests, reëxamination of the patient, reviews of the history of the patient, of contacts and of the close relations, and quantitative studies repeated over a number of weeks will be helpful. Examination of the spinal fluid in these cases is usually a necessity. Repetition of the false-positive test sometimes occurs.

Example 1: J. N. H. had suspicious lesions of chancre which were darkfield negative on 2 occasions, and the blood was repeatedly positive in titers of 1:10 and 1:40

on 2 succeeding days. The spinal fluid was negative. The wife and child were negative. Repetition of the tests 2 weeks later was negative. Examination of the patient and repetition of the tests 4 weeks later were negative. There was a history of malaria 1 year prior to the test. Conclusion: Two false positives in a nonsyphilitic patient with malaria.

Example 2: E. S. P., a white male aged 32, was first seen on June 4, 1945, when a positive premarital STS was discovered in a local (state-approved) laboratory. The history and physical examination were negative. Recheck at that time showed a weakly positive Kahn and negative Hinton and Eagle tests. A battery of 5 tests, including the cardiolipin (our own), was negative 1 week later. This man had a negative STS when he was discharged from the Army of the United States, August 24, 1944. Should he be prohibited from marriage? We thought not and allowed the marriage to be consummated. Diagnosis: biologic false-positive STS.

On May 13, 1946 the wife of this patient was delivered of a normal male infant at term. Follow-up on mother and child has been negative to date.

Examination of the man's STS by a laboratory in connection with his position showed the Kahn 1 plus, and the Eagle and Mazzini tests positive on January 3, 1947. The patient had a slight cold with fever at the time of this examination. Recheck (our own) on February 12, 1947 showed a negative Kahn test, and the battery of 5 tests was repeatedly negative.

Impression: obscure biologic false positive in a normal male.

Discussion

The attending syphilotherapist must use a great deal of care and tact in handling the patient with a false-positive serologic test. Considerable social stigma may attach to the diagnosis of syphilis, and a hasty and hazy conclusion, especially based upon 1 positive serologic report, is to be heartily condemned. The false diagnosis of syphilis in any stage before the presence of the disease is unquestionably proven may cause personal harm, needless mental anguish, and much psychic trauma.

The interpretation of serologic tests is not necessarily a matter for the expert but usually requires only careful and judicious thinking coupled with knowledge of the tests, the laboratory, and the patient involved. Specialized consideration of the facts is a necessity. In the case of the questionable serologic test all treatment must of necessity be withheld until all the facts are in and the evidence evaluated. Treat the patient, not the serology.

The question of the patient who has been treated with penicillin for any disorder, particularly gonorrhea, deserves mention at this time. It is now established that sufficient penicillin for the treatment of gonorrhea can hide and delay the true positive serologic test for varying lengths of time.[34] False-positive tests, as well as false negatives, may occur when this state of affairs is found, and repetition of the tests and reëxamination of the patient is obligatory.

The use of penicillin also complicates the qustion of reinfection or relapse, and false positives in such cases require discrimination in arriving at accurate conclusions. It is our impression that after adequate treatment with penicillin for early syphilis repeated positive tests may indicate reinfection as well as relapse.[88]

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(*Continued on page 188*)

NEWER DEVELOPMENTS IN ANESTHESIA*

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IT IS not repetitive at the outset to emphasize that anesthesiology embraces a study of the chemistry and pharmacology of local and general anesthetic agents, as well as a knowledge of their clinical usefulness, applicability and safety. In addition, such related fields as blood transfusion and various types of fluid therapy are at least in part a portion of the anesthesiologist's work. In recent years the use of bronchoscopy preoperatively and postoperatively in order to remove excessive accumulation of mucus in the tracheobronchial tree has fallen to the qualified anesthesiologist. It has become increasingly apparent that the anesthesiologist should be qualified to perform suction bronchoscopy, because the opportune time for handling such patients is immediately after the administration of inhalation anesthetics has been discontinued, rather than to delay until a subsequent time when the services of an endoscopist can be obtained. Anesthesiology also necessitates a thorough knowledge of the use of oxygen in its various forms, such as by means of oxygen tents and the nasal catheter, and the use of oxygen under positive pressure.

It may be well to take up the developments in the field of anesthesiology in separate categories to point out current trends and advances. For some of the time-honored volatile general anesthetic agents there has been little added; however, during the past year several authors have written about the use of chloroform and have made a plea that the knowledge of the use of chloroform in particular not be lost completely.

It is the opinion of some anesthesiologists that a more profound training should be given to persons studying in this field, emphasizing the safety of certain older anesthetic agents such as ether, chloroform, and nitrous oxide when employed with all of the modern mechanical equipment that is available. For example, it is suggested by some workers that chloroform skillfully administered in the presence of an abundance of oxygen is a safe method of anesthesia and should not be underestimated or forgotten. I believe that chloroform can be used safely by a well-qualified individual who has had training and experience with this drug; but we must not lose sight of the dangers which may accompany the use of this agent, particularly for long periods of time with insufficient quantities of oxygen.

Cyclopropane can no longer be classified as a new anesthetic agent but we can state that the addition of curare or other curariform drugs gives to the anesthesiologist a combination of agents which is definitely a new development. It has been shown that the addition of curare intravenously to a patient receiving cyclopropane permits adequate surgical relaxation without maintaining the deeper planes of surgical anesthesia. We have also learned that the addition of curare to ether vapor by the inhalation route gives us a very potent combination of agents and that the margin of safety with curare and ether vapor is rather limited. Marked respiratory depression with ether vapor occurs with about one third of the amount of curare intravenously as compared with cyclopropane. The more pronounced respiratory depressant action of curare with ether is probably due to the innate curariform action present in diethyl ether. From a technical standpoint it is recommended that material and equipment for intratracheal intubation be at hand when curare is utilized with ether as an inhalation or an intravenous general anesthetic agent. It is also recommended that an individual conducting an anesthetic with curare be thoroughly familiar and skilled in the technic of intratracheal intubation. The reason for these precautions should be clear because in the event of respiratory depression to the point of apnea, it becomes an absolute necessity to carry on artificial pulmonary ventilation. It is a misnomer to rely upon the use of such pharmacologic antagonists as prostigmine, ephedrine, or eserine because these agents, even if they are efficient, will not exert their action in most instances in sufficient time to prevent irreparable damage from hypoxia.

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Inasmuch as curare is being used quite extensively with pentothal sodium, a few comments concerning this procedure are notable. It should be remembered that curare is not an anesthetic agent, but rather a drug which has the ability to produce muscular relaxation by preventing the action of acetylcholine. Likewise, it should be recalled that pentothal sodium, which at the present time is our most efficient intravenous anesthetic, is still an agent which is not recognized as one which will produce muscular relaxation in all surgical interventions. Pentothal sodium was introduced as a relatively short-acting intravenous anesthetic which should be used for operations of relatively short duration when adequate muscular relaxation is not essential. Whereas many patients exhibit a certain amount of muscular relaxation with pentothal sodium, it is still emphasized that it is folly to expect relaxation in all instances. Currently we are faced with the judicious use of a potent muscle-relaxing agent, such as curare, and a relatively potent anesthetic agent capable of producing narcosis rapidly with a certain amount of respiratory depression. The pitfalls in the use of curare and pentothal are encountered when one attempts to "push" pentothal and curare simultaneously to obtain muscular relaxation. Since curare in certain doses can produce intercostal muscle paralysis and eventually diaphragmatic paralysis, one must be circumspect in the administration of pentothal sodium which by its own action can produce the same clinical effect. All too frequently I have seen the clinical picture of apnea when these two agents are used in conjunction with each other, and it is a fine point in diagnosis to know which agent has the predominating action. In any event, the net result is a prolonged and usually an alarming respiratory depression. Let me say that the routine choice of pentothal sodium and curare for many surgical interventions defeats the judgment and clinical experience of the anesthesiologist because it does not satisfy the prime consideration of individualizing the choice of agent and method of anesthesia for the individual patient.

Spinal and Regional Anesthesia

Spinal anesthesia or subarachnoid block has been improved recently by means of new technics rather than by the introduction of a new anesthetic agent. The addition of glucose to make a hyperbaric solution is helpful to prolong anesthesia and control the level of anesthesia. Hyperbaric solutions of nupercaine have been advocated by Adriani[1] and others for "saddle block" in obstetrics. Currently there is an increasing popularity in the use of continuous or fractional spinal anesthesia. The development of continuous spinal anesthesia was the work of Lemmon,[2] who used a malleable needle. Subsequently, the use of a ureteral catheter was suggested for continuous spinal anesthesia. The use of the ureteral catheter for anesthesia has been extended now for the treatment of certain vascular conditions, eclampsia, and renal emergencies. Spinal anesthesia will allow pooling of blood peripherally by dilating veins and will subsequently decrease venous blood pressure which is of definite benefit in the treatment of myocardial failure with mitral stenosis. Hingson[3] has demonstrated in several cases that pulmonary edema and acute renal insufficiency can be benefited by continuous spinal or caudal anesthesia by means of a ureteral catheter. Likewise, several eclamptic cases with hypertension, renal failure, complicated by convulsions have been successfully carried through these episodes, with recovery taking place in a high percentage of cases. Controlled spinal anesthesia for such conditions reduces systolic blood pressure, reduces venous pressure, and produces an effect of bloodless phlebotomy without altering the hemoglobin percentage of the patient's blood. This latter effect is important in dealing with patients who have in addition to other complications a marked secondary anemia. It has been suggested by Hingson[3] that in cases of acute anuria continuous spinal anesthesia produces in a measure the action of a pavaex boot, inasmuch as the systolic blood pressure can be reduced at will by the administration of a minimal dose of spinal anesthetic agent, for example 15 to 20 mg. of metycaine. As this action wears off the blood pressure gradually rises. This alternating change in systolic blood pressure constitutes the so-called pavaex boot action on the afferent renal blood supply. Children suffering from acute nephritis have been successfully treated by means of continuous caudal anesthesia if treated early in the course of the disease. Mechanically, continuous caudal anesthesia is easier than continuous spinal in children. The continuous method of spinal anesthesia can be controlled segmentally to anesthetize only certain spinal nerves. For example, this controllability means that it is possible to have anesthesia involving the spinal nerves from D5 to D12 without affecting the nerve supply to the lower extremities. This contribution was suggested by several workers. One additional improvement in the technic of spinal anesthesia by means of the ureteral catheter has been the development of an adapter to fit the free end of the catheter securely and conjointly attached by means of a luer-lok to a glass syringe. This is a modification of the original Borst ureteral catheter adapter. The adapter provides a safe sterile connection between the catheter and syringe, and causes less mechanical damage to the free end of the catheter than the use of the blunt 24-gauge needle previously advocated.

Vasopressor agents such as epinephrine and ephedrine sulfate have been incorporated in spinal anesthetic agents, particularly by the single dose method, and have been shown to definitely prolong the action of spinal anesthetic agents. Presumably the increase in duration of anesthesia is due to a less rapid systemic absorption of the agent from the subarachnoid space. The local vasoconstricting property of the ephedrine or epinephrine accounts for this decreased rate of absorption.

NEWER DRUGS AVAILABLE TO ANESTHESIOLOGISTS

Several new substances have been suggested as premedicating agents. Methadon (AN-148) is an agent with some of the analgesic properties of morphine and may be given by mouth or by hypodermic injection in doses of 10 to 15 mg. It is moderately habit-forming, but it is not as potent as demerol, dilaudid or morphine.

Certain isotopes of radioactive elements such as carbon and sulphur will become available shortly, and it is possible that S35 (radioactive sulphur) will be obtainable in sufficient quantity to attempt to link this isotope with pentobarbital sodium. This would result in a compound identical with pentothal sodium except that the sulphur component on the urea side of the molecule would contain the radioactive isotope, S35.

Myanesin, a drug similar in action supposedly to curare, has been given rather extensive trial by several investigators.[4] At the present time it is the consensus that myanesin is not nearly as potent as curare, and when given in very large doses it is not without untoward effects. Convulsions have been observed experimentally with this agent, particularly when used in large doses. A muscular relaxing effect of myanesin therefore does not approach that of curare or D-tubocurarine chloride.

RECENT CONTRIBUTIONS TO SUPPORTIVE VASCULAR THERAPY

In a recent communication by Page[5] an excellent critique was presented on the "Participation of the Heart in Shock" and a discussion is presented on the use of two comparatively new drugs that may have some value in the treatment of hemorrhagic shock, namely tetraethyl ammonium chloride and dibenamine.

"Good chemical evidence exists that shock depletes the heart of substances necessary for its functioning. The amount of adenosine triphosphate, the energy source most directly coupled with function, is sharply reduced, as are other substances less directly connected with energy reservoirs such as phosphocreatine and glycogen (LePage). The decomposition of these reservoir materials initiates the glycolytic mechanisms leading to production of inorganic phosphate and lactic acid."

Page[5] and his associates have shown that the replacement of blood into an artery instead of a vein is useful when shock is severe. When the arterial pressure is not less than 80 mm. of mercury, intravenous transfusion ordinarily is effective. Pressures less than this require rapid infusions and they suggest intra-arterial routes. They have employed the femoral, dorsalis pedis and radial arteries.

"The latter two are cannulated, and clotting is prevented by periodic washing out through a side arm with a solution of heparin. Blood, plasma or even saline solution are given from a reservoir bottle under a fixed air pressure generated by a rubber blast bulb. The pressure in the reservoir is usually set 20 to 30 mm. of mercury above the systolic level in the patient and blood is allowed to flow in until equilibration between the arterial contents and reservoir has occurred. The pressure in the reservoir is again raised in increments of 20 mm. Hg or more until the desired blood pressure in the patient, usually 100 mm. Hg, is achieved.

"By taking serial X-ray films after injection of radiopaque medium into an exsanguinated dog, Glasser and Page[5] found that fluid flows retrograde up the aorta filling the kidneys first, then the coronary and medullary vessels. Thus both the heart and vital centers of the medulla early receive oxygenated blood without the blood's having to traverse the lesser circulation before becoming available to the tissues. The pressure in the reservoir acts as a secondary heart to provide blood quickly and effectively to those organs most in need of it. It should be emphasized that this is only necessary when shock has advanced or is advancing rapidly."

A NEW DEVELOPMENT IN ADMINISTRATION OF PARENTERAL DRUGS

A completely new method of introducing parenterally such agents as insulin, procaine, morphine and other premedicating drugs without a needle is available. The apparatus is a hypospray. This method of introducing drugs into the body depends upon the sudden release of compressed air at pressure up to 125 pounds per square inch, causing the injection of material from a small metapule through the skin into the subcutaneous tissues to a depth of ½ to 1½ inches. There is no needle mechanism. A blast force of compressed air forces the medicating agent through the dermis without evidence of trauma. The opening in the metapule is 1/3000 of an inch. This new method for the administration of drugs evolves from experiences with "blast injuries." The avenues which are immediately opened up in the field of parenteral therapy by the hypospray are legion. For example, the onus of the confirmed diabetic may be greatly lessened by means of this method of injecting insulin. The apparatus is very

(*Continued on page 189*)

PRESENT TRENDS IN GASTRIC SURGERY*

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DURING the past decade there has been a tremendous upsurge in the general field of surgery, especially in the United States. Many factors have been responsible for this and among them may be mentioned the rapid development of anesthesiology, the general appreciation of the importance of disturbed physiology incident to the course of disease, both during operation and in the postoperative period and the accurate employment of methods to rectify these disturbances, the need for correcting food, electrolyte, vitamin and fluid deficiencies, and the realization of the importance of proper preoperative preparation and thorough postoperative care. During this time surgery of the stomach has kept pace with this development. It is the purpose of this paper to summarize what important changes have taken place in this field of surgery and what are the present-day generally accepted concepts of the therapy of the more common diseases of the stomach.

Gastric Ulcer

The three common sites for gastric ulcer, the prepyloric region, the lesser curvature near the reëntrant angle, and the juxta-esophageal part of the lesser curvature, demand a different approach in each instance. The ulcer located in the prepyloric area should be a cause for grave concern to the physician, because it is here that it is extremely difficult to differentiate between a benign and malignant ulcer, either radiographically or gastroscopically. Every surgeon who has had a large experience with gastric surgery can cite instance after instance in which the patient has been treated for valuable months under a diagnosis of benign ulcer only to find at operation that a carcinoma has been responsible for the X-ray findings. Unfortunately, all too frequently at the time of operation the lesion is found to be inoperable. It now seems to be the consensus that it is best to consider all ulcers in this region as malignant primarily and accord them surgical therapy by gastrectomy. If this principle were more widely adopted, many more early carcinomas would be treated adequately and our present rather dismal picture of cancer of the stomach would be considerably altered. Whether such ulcers are originally benign and later become carcinomatous is still a debatable point. Certain it is that such academic considerations should not enter into the decision to accord the patient the proper surgical therapy.

The most common site for gastric ulcer is at the reëntrant angle of the lesser curvature. These ulcers have the tendency to penetrate deeply with the formation of extragastric pockets visible in the X-ray film. They may burrow into the pancreas or the under surface of the left lobe of the liver. They may reach considerable size and may closely simulate carcinoma both radiologically and gastroscopically. In the differential diagnosis, test meal determinations may be of little help. We all have seen anacidity with gastric ulcer and some acidity with gastric carcinoma in this location. The majority of these ulcers, however, are small and superficial and respond to adequate medical therapy. It is now generally agreed that ulcers in this location should be accorded a thoroughly adequate course of medical treatment, to be followed in 4 to 6 weeks by a repeat roentgenographic examination, supplemented in some instances by gastroscopy. If there is definite evidence of healing as indicated by the disappearance of the niche in the X-ray film, conservative therapy should be continued. If, however, there is persistence of this deformity and suggestion of rigidity of the gastric wall along the lesser curvature, grave suspicion should be entertained that a carcinoma rather than an ulcer is the underlying disease. Exploration should, therefore, be undertaken forthwith. It seems to me that it is much better to err in the direction of disclosing a benign ulcer at operation than to overlook an early carcinoma by persistence in continuing medical therapy. I have seen too many patients who have been permitted to reach the inoperable stage because of the false sense of security developed by the attending physician by questionably provocative X-ray findings.

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* Read at the Eighteenth Annual Scientific Assembly of the Society, October 6, 1947.

Ulcers at the juxta-esophageal area constitute another problem for physician and surgeon. The X-ray film, as with lesser curvature ulcers, usually discloses a niche with a tendency toward penetration, and the gastroscopic picture is one of a punched-out lesion with normal mucosal folds in the surrounding area. These ulcers are usually accompanied by a high acidity, and the response to medical therapy is unpredictable. I have records of 3 patients who were observed over a 10-year period with repeated X-ray examinations who eventually developed carcinoma in the same area. Whether this was a true carcinomatous change of a preëxisting benign ulcer or an independent lesion is, of course, extremely difficult to say. However, the train of events is at least provocative of speculation. For ulcers in this location that do not respond to medical therapy, recourse can be had to the palliative gastrectomy of Madlener. This consists of gastrectomy as for duodenal ulcer, leaving untouched the ulcer-bearing part of the upper stomach. The theory of this procedure is that the anacidity produced by the gastrectomy results in spontaneous healing of the ulcer. Colp and his associates have reported a series of such cases with unusually satisfactory late results. The one danger associated with this procedure is that of overlooking a carcinoma. Intragastric biopsy of the ulcer edge should settle this point. Whether bilateral vagotomy will accomplish the same result remains to be seen.

Duodenal Ulcer

The problem of duodenal ulcer still remains one of great interest to physician, surgeon and physiologist. This interest has been considerably augmented by the recent revival by Dragstedt of the operation of vagotomy. It must be emphasized again that duodenal ulcer is essentially a medical disease and that surgery should be undertaken under certain specific indications. These may be listed as (1) persistence of symptoms in spite of adequate medical therapy, (2) obstruction caused by scarring, (3) repeated hemorrhages, and (4) perforation and penetration.

It is generally agreed now that in the definitive surgical treatment of duodenal ulcer gastroenterostomy should not be employed except in the occasional elderly patient with obstruction and a low acidity. The operation of choice today is partial gastrectomy, and Lewisohn and Berg deserve a great deal of credit for their championship of this operation in the early twenties in spite of almost universal antagonism on the part of the American surgical profession. There seems to be considerable misunderstanding among surgeons and physicians concerning the physiologic basis of this operation. It should be remembered that most of the acid-secreting cells are in the fundus and upper half of the stomach. The cells which secrete the hormone, secretin, which stimulates the acid cells, are located in the pyloric antrum and pyloric ring. Inasmuch as the production of anacidity is the prime desideratum in the successful treatment of duodenal ulcer, the complete removal of this hormonal factor is the essential feature of the operation of gastrectomy.

It has been repeatedly demonstrated that it is not necessary to attempt complete removal of every acid-secreting cell in the stomach, because this would entail almost a complete gastrectomy, an obviously undesirable procedure. For this reason, the exclusion operation of Finsterer, which leaves behind the pylorus and part of the antrum, is an incomplete operation which cannot be expected to produce anacidity and which is followed by a high incidence of gastrojejunal ulcer. For the reason stated, it is incumbent on the surgeon to remove in practically every case the ulcer-bearing portion of the duodenum in order to be sure that the pylorus has been removed. Unless the pylorus is removed the operation is decidedly incomplete, and I cannot emphasize this feature too often. In the occasional case, the ulcer may be located in the second portion of the duodenum. If the pylorus is readily discernible and can be removed, it is not necessary to indulge in a complicated operation to remove the ulcer, because it will heal spontaneously after the gastrectomy. The proximal limit of the gastric resection is at a level well above the reëntrant angle which results in a removal of two thirds to three quarters of the organ. Whether one does an anterior anastomosis or a posterior one is really not too important. I have continued using the posterior anastomosis because I feel that there are fewer postoperative mechanical difficulties. Great care is exercised in effecting a proper gastroenteric stoma in order to guard against the postoperative "dumping" syndrome. In my series of cases soon to be published, there has been an operative mortality of about 3 per cent and an incidence of gastrojejunal ulcer of 2 per cent. The latter figure is attributed to insistence on removal of the ulcer-bearing part of the duodenum in order to insure complete pylorectomy.

The main problem today in the treatment of duodenal ulcer is that concerned with the role that vagotomy will play in the over-all picture. There is no question that complete bilateral vagotomy produces a diminution in the total gastric secretion as well as a reduction in acidity by reason of its influence on the cephalic phase of digestion. It is also certain that vagotomy produces marked motor disturbances in the stomach resulting in pylorospasm and gastric dilatation. Unless drainage of the stomach is provided for by a gastroenterostomy, marked retention with disagreeable putrefaction of retained food will result, something considerably worse for the patient than the original disease. It is for this reason that Dragstedt and others now practice infradiaphragmatic vagotomy with complementary gastroenterostomy. Insufficient time has elapsed to offer any appraisal of the efficacy of vagotomy in the treatment of duodenal ulcer. Long-term follow-up studies will be needed to clarify the issue. It will be extremely interesting to learn the incidence of gastrojejunal ulcer after a period of 5 and more years. It is possible that, once the effect of vagotomy has been dissipated, the hormonal stimulus to acid secretion may supervene and that the percentage of stomal ulcers may prove to be high. It is my present opinion that, if gastrectomy can be accomplished with an operative mortality of between 2 and 3 per cent and an incidence of gastrojejunal ulcer of under 5 per cent, this procedure should remain the operation of choice, and that vagotomy should be used as an adjuvant to gastrectomy in those cases in which there is an abnormally high gastric acidity and total volume secretion and in certain cases with hemorrhage. From the experience gained so far vagotomy seems to be a specific operation for gastrojejunal ulcer following adequate gastrectomy.

Carcinoma of the Stomach

Cancer of the stomach still remains the most common cancer of the gastrointestinal tract and the one with the most dismal outlook. One gains the general impression that the past 5 years have seen more cases in the early stages at the operating table than heretofore, and this may in part be due to the extensive cancer educational program, the more general use of the gastroscope, and the more critical appraisal on the part of practicing physicians of the early symptoms of this disease. Anorexia stands out as the outstanding early symptomatic manifestation. The sudden loss of appetite in an otherwise healthy individual should be cause for concern and should call for immediate roentgenographic examination of the gastrointestinal tract. Persistent vague indigestion should not be by-passed with placebos by patient and physician. Pain appears as a later symptom of gastric carcinoma. Anemia may be one of the first evidences of the disease. Loss of weight may be noted early. There should be no hesitancy on the part of the physician to employ gastroscopy in doubtful cases. This diagnostic modality may settle the diagnosis.

Cancers at the cardiac end of the stomach frequently make their presence known by the symptom of dysphagia due to diminution in the caliber of the cardiac orifice. A carcinoma originating in the so-called silent area of the stomach along the upper end of the greater curvature may cause few, if any, symptoms until it begins to encroach on the lumen of the cardia.

Modern advances in the therapy of gastric carcinoma have been along the following lines:

1. Need for extended careful preoperative preparation.

2. The liberal use of whole blood before, during, and after operation.

3. The need for radical resections with meticulous removal of the great omentum and all associated lymph nodes, especially at the origin of the left gastric artery.

4. Radical resections of carcinoma of the upper end of the stomach by the use of a combined abdominothoracic incision with intrathoracic esophagogastric anastomosis. This has been one of the great recent advances in gastric surgery.

5. The more extended use of the operation of total gastrectomy. In order to greatly simplify this operation I recommended over a year ago the combined abdominothoracic approach and the use of the Y anastomosis between esophagus and jejunum after the principle of Roux. The combined incision permits of accurate visualization of the entire field of operation, thereby assuring a radical lymph node dissection, and the Y anastomosis produces, in effect, a pouch of jejunum to act as a stomach and to minimize considerably the digestive disturbances usually seen after the ordinary loop esophagojejunostomy.

I now have a not inconsiderable number of 5-year and over survivors following radical stomach operations for cancer. As time goes on this number is apparently increasing, although not as rapidly as one would wish. Future improvement in results will depend in large part on the diagnostic acumen of the practicing physician and the speed with which he refers his patients for competent surgical therapy.

PREGNANCY ASSOCIATED WITH POLYOSTOTIC FIBROUS DYSPLASIA

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SINCE von Recklinghausen's classical description of the pathology of cystic changes in the human skeleton in 1891, the various causative diseases have been fairly well differentiated. However, in spite of numerous individual reports, polyostotic fibrous dysplasia was not fully recognized in this country until Albright[1] and Lichtenstein,[2] working independently, published their observations in 1937 and 1938. The latter discussed the confusing nomenclature and originated the name now generally used to describe this disease of the skeletal system, which is characterized by areas of rarefaction resembling cysts due to replacement of bone by fibrous tissue.

Its etiology is not known, but its inception in early childhood suggests a congenital origin. Albright suggests that its origin is best explained on the basis of an embryonic lesion in a sclerotome which could result in both skin and bone lesions. Moehlig and Schreiber[3] believed it to be due to an unbalanced chromosomal aberration. Furst and Shapiro,[4] who reviewed the literature in 1943 and added 2 cases to the 71 already reported, ascribed the disease to some hypothalamic lesion in the region of the third ventricle, with secondary disturbances in the anterior lobe of the pituitary, resulting in abnormal stimulation of its various tropic hormones.

Mild, aching pain over the involved bone may be the first symptom, or the condition may be first noticed as a painful limp and occasionally as a pathologic fracture. Patchy areas of light brown pigmentation are frequently found, most commonly over the buttocks, sacrum and spine. Precocious puberty is a common finding in females afflicted with the disease, with menstruation beginning at 2 or 3 years of age and well-developed sex characteristics a few years later. Facial asymmetry with ocular proptosis is a characteristic finding. These component elements, however, are not always present in every case, and the absence of one or more of these findings should not militate against the diagnosis.

The X-ray findings are characteristic. The skeletal involvement consists of multiple, localized areas of rarefaction resembling cysts, with normal bone elsewhere. There is no generalized decalcification as in hyperparathyroidism. Indeed, the areas of decreased density may be associated with what appears to be osteosclerosis resulting in obliteration of the medullary canal, particularly noticeable at the base of the skull. The involved bone is expanded, with thinning of the cortex over the site of the lesion which fades gradually into normal bone. Periosteal reaction rarely occurs except at the site of a fracture. Early epiphyseal union may occur. The epiphyseal lines may be irregular, but frequently the epiphyses remain intact in spite of diffuse diaphyseal involvement. Various secondary bone deformities result and pathologic fractures are not uncommon. The skull is involved in various ways. Irregular, dense areas may give the appearance of Paget's disease. Dense fibrotic processes in the facial bones imitate the findings in leontiasis ossea. Obliteration of mastoid cells and paranasal sinuses by dense fibrous deposits produce facial asymmetry and ocular proptosis.

Microscopic examination of the diseased area shows a regressive metaplasia of bone into dense fibrous and fibroplastic tissue, occasionally with masses of cartilage present. Cement lines and osteoid tissue are commonly present, giving evidence of bone regeneration.

There is no apparent significant disturbance in mineral metabolism. Blood calcium and phosphorus levels are usually normal, but the former may be slightly elevated. Serum phosphatase levels may be elevated and reflect osteoblastic activity proportional to the extent of skeletal involvement. Blood cholesterol and serum protein levels are normal. The urinary calcium is usually normal but may be increased in active cases. The basal metabolic rate is usually normal.

The disease is usually discovered in early childhood. It is rarely fatal, its course being one of slow chronicity with the process becoming more or less static in later life.

REPORT OF CASE

The patient was a well-nourished, 34-year-old, white, married woman, gravida I, para O, who was admitted to the hospital on May 14, 1947 for delivery of a full-term pregnancy by elective cesarean section. She gave a history of having fractured her left femur at the age of 5 and again at the age of 9, when another child fell against her leg while skating. Unfortunately, no X-ray films were made at that time. Two years later she felt the same bone "snap" as she was running, after which she was able to walk on the leg but with considerable pain. A diagnosis of osteitis fibrosa cystica was made on X-ray examination at that time. A few months later she fractured the same leg again and was treated on this occasion by surgical removal of a "bone cyst" at the site of the fracture and immobilization of the leg in a cast for 4 months. The left femur was again broken in a fall when the patient was 17 years old, and the leg was placed in a cast for 5 months. Since that time no further injury to the leg had occurred, but she had noticed an occasional twinge of pain in the area of the fracture.

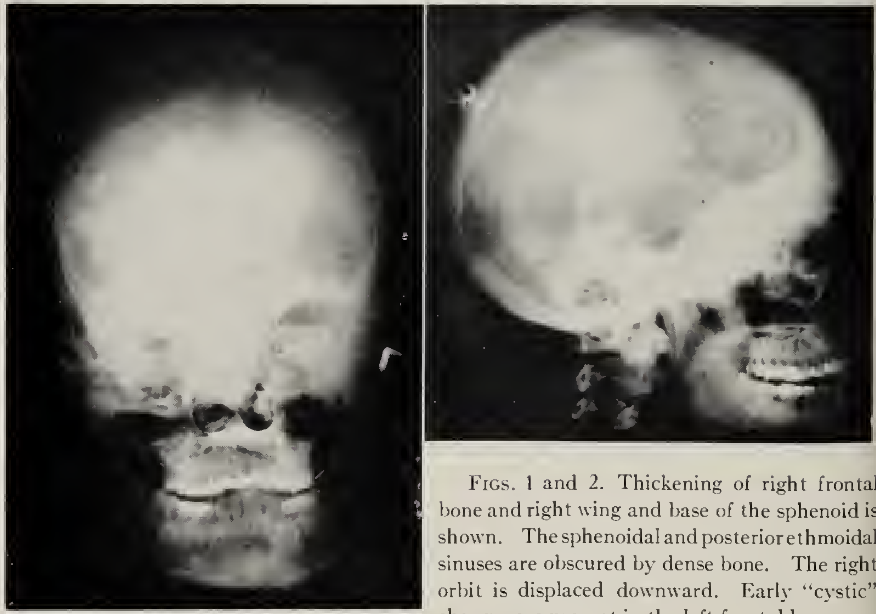
At the age of 3 the patient began to exhibit an external strabismus of the right eye, and atrophy of the disc is known to have been present by the time she was 11.

She had measles and chickenpox during childhood without sequelae. The parathyroid glands were explored in 1931 with negative findings. An appendectomy was performed in 1945.

Her father was a diabetic who died in coma at the age of 59. Her mother died of tuberculosis at the age of 50. She has 1 brother in good health who is of short stature, being 5 feet 1½ inches in height.

She had been married for 10 years without previous pregnancies. Menstruation began at 12 years of age, with an interval of 28 days and duration of 6 days, with moderate flow.

Physical examination revealed a well-nourished, 34-year-old white woman lying quietly in bed in no discomfort. Her height was 63 inches, her weight 133 pounds, the temperature 98.6°F., and the blood pressure 140/70. There was an external strabismus of the right eye with atrophy of the disc. The sight in this eye was limited to perception of light and slight color differentiation. The right orbit was somewhat lower than the left. producing a noticeable asymmetry of the face. A considerable amount of dental work had been done. A well-healed, transverse linear scar was present over the thyroid. The



FIGS. 1 and 2. Thickening of right frontal bone and right wing and base of the sphenoid is shown. The sphenoidal and posterior ethmoidal sinuses are obscured by dense bone. The right orbit is displaced downward. Early "cystic" changes are present in the left frontal bone.

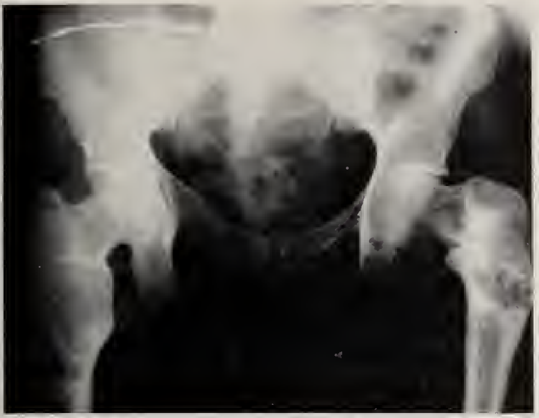


FIG. 3. The pelvis and upper ends of femurs show numerous, expansile, cyst-like lesions. Marked asymmetry of the pelvis is noticeable.

breasts were well developed, and secretion could be expressed from the nipples. Examination of the abdomen revealed a full-term, intrauterine pregnancy with the fetus lying in LOT. The fetal heart sounds were heard in the left lower quadrant. There was a marked limitation of abduction and external rotation of the left leg, which was found to be 1½ inches shorter than the right. There was also moderate limitation of the same motions of the right leg. A well-healed, linear scar, 5 inches in length, was present on the outer surface of the left thigh.

The cervix was closed and the presenting part unengaged. The pelvic measurements were: I.S. 25 cm.; I.C. 27 cm.; E.C. 19 cm.; B.I. 8 cm.; D.C. not reached.

X-ray skeletal survey was reported as follows: Survey films of the skeleton show numerous, expansile, slightly cystic-appearing lesions of the bone. These lesions are indefinite in outline and contain calcium. They are particularly marked at the upper ends of both femora, the right pubis, the medial condyle of the right knee, the entire shaft of the right humerus and the right ribs. There is also diffuse thickening of the right frontal bone, the wing of the right sphenoid, and the basisphenoidalis. The sphenoid sinuses and posterior ethmoids are obscured by dense bone. Early cystic changes are seen in the left frontal bone. Cystic expansion is present in the greater portion of the shaft of the right tibia. Bones of the left leg and left upper extremity are normal. All of the changes in the bones are characteristic of polyostotic fibrous dysplasia of bone (Albright's syndrome). (Figures 1, 2, 3 and 4.)

The hemoglobin was 71 per cent. The red blood cells numbered 3,870,000, and the white blood cells 18,450 per cu. mm. of blood. The blood Wassermann test was negative. The blood type was group A, Rh positive. The blood calcium was 13 mg. per cent, and the blood phosphorus was 3.5 mg. per cent.

On May 15, 1947 the patient was delivered of a normal, female infant weighing 7 lbs., 5 oz., by classical cesarean section. X-ray examination of the baby's skeleton was negative. There was insufficient lactation to allow the patient to nurse her child; otherwise the postoperative course was uneventful, and the mother and infant were discharged in good condition on the 7th postoperative day.

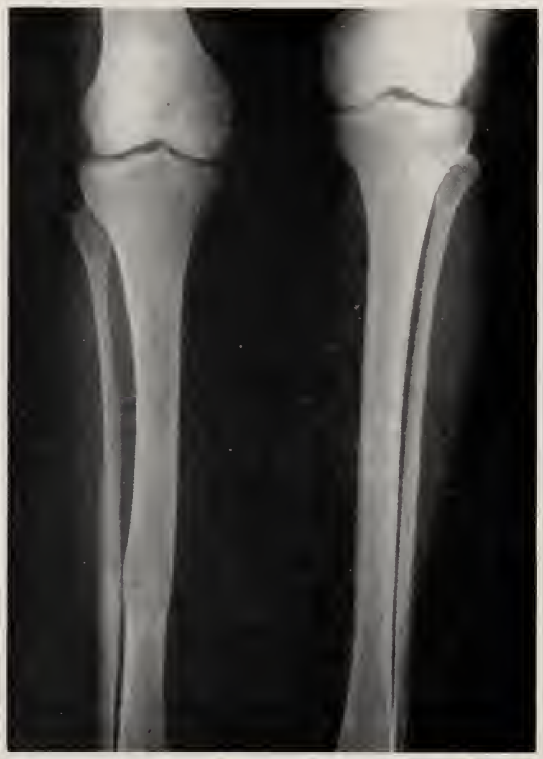


FIG. 4. Femurs of different lengths, with cyst-like lesions in right tibia.

DISCUSSION

The diagnosis of polyostotic fibrous dysplasia in this case was based primarily on the characteristic X-ray findings supported by absence of significant irregularities of the blood calcium and phosphorus levels. No unusual skin pigmentation, however, was found, nor was there any history of precocious sexual development which is so frequently associated with this disease in females. The patient's history is of interest in

(*Continued on page 189*)

President's Page

AN ANSWER TO CRITICISM

The recently created Committee on Medical Care in Public Institutions is an answer to criticism that our Medical Society has failed to assume its proper role in the civic affairs of the District of Columbia. Actually, such a committee has been under consideration for several months, its formation being authorized at the December meeting of the Society's Executive Board.

This Committee will interest itself in the quality of the medical care which is provided in all District tax-supported institutions. The Committee hopes to make periodic visits to all such institutions to observe their physical plants as well as the kind of service given the inmates. It will confer with such officials or individuals as it deems necessary to acquaint itself with all factors. Its findings and opinions will be reported directly to the Executive Board, which in turn will submit matters of policy to the Society with its recommendations. Supplied with this information, the Society will be in a position to take an intelligent stand on matters pertaining to health in our public institutions.

It is not intended that this Committee shall merely criticize, but that it shall be equally ready to praise and lend its support. As many of the shortcomings of our institutions are said to be due to lack of funds, one particular way in which the Committee can be of assistance is to recommend that appropriations for certain institutions be increased. On the basis of its recommendations, the Society, if it concurs, would, through its representatives, make an appearance before Congressional committees.

In recent years, the Society has taken little or no part in budget hearings; but the citizens of this community should and do look to its physicians for advice and for unbiased information regarding its health needs. Let us support this Committee and justify the confidence placed in our Society by the public.

Raymond T. Holden

Editorials

THE ARMY MEDICAL LIBRARY*

One hundred and twelve years ago Surgeon General Lovell of the United States Army started an office collection of medical books. Twenty-nine years later Dr. John Shaw Billings, an Army surgeon, came to Washington to be assistant to Surgeon General Joseph K. Barnes. Dr. Billings became interested in that office collection of medical books. He perceived the need for a national collection of medical literature, perceived the need for an index to medical literature, and then set about providing a solution which would meet those needs. The result was the Surgeon General's Library, later to be called the Army Medical Library. This library, now one of the largest of its type in the world, and its major publication, the *Index-Catalogue of the Library of The Surgeon General's Office*, are monuments to the vision and genius of Billings. It is indeed the institution envisioned by him—a national medical library which in fact provides service not only to the medical profession of the United States but to much of the civilized world. It has, however, a particular obligation to the medical profession of the District of Columbia. This special local obligation conforms to the policy established by a Joint Resolution of the Fifty-second Congress providing that the research facilities of a number of Federal institutions in Washington should be available to scientific investigators and students in the District of Columbia. The Army Medical Library has always been proud to be privileged to make its facilities available to the members of the local medical profession. The personal contact is stimulating to the library staff and increases their appreciation of the relationship existing between medical library practice and the practice of medicine.

The Army Medical Library is prepared to provide for the local physicians a limited reference service, the loan of books and bound periodicals, microfilm and photostatic reproductions of articles (subject to certain copyright restrictions), use of the portrait collection, and personal assistance in the solution of their library research problems. One great facility of the Library which is not so well known and which is only available to local users is the unpublished cards of the *Index-Catalogue*. There are approximately 1,500,000 of these cards, representing almost current coverage of most of the world's medical literature. In addition to its regular hours the Library is open all day on Saturdays, on Sunday afternoon, and on Wednesday evening, primarily with the objective of service to local users.

Present plans for the Army Medical Library contemplate the improvement of the services it renders. Higher grades make possible the selection of more highly qualified personnel, and the proposed appointment of a well-trained medical officer as the permanent director should act in this direction. As the result of a survey of the Library in 1944, many of the practices and technics have been modified and improved. It is proposed to survey the current requirements for bibliographic control of the tremendous volume of medical literature now appearing in print. In this postwar period in which medical research is surging forward, the time is surely propitious for a survey and careful evaluation of the present publications presumed to be providing adequate indexing of medical literature. Two of these, the *Index-Catalogue* and the *Current List of Medical Literature*, are publications of the Army Medical Library. If the result of this survey indicates that they do not adequately serve their purpose, it is proposed that they be modified (abandoned, revised, replaced, or merged as the needs may dictate) to provide the medical profession with the best instruments of this type that can be produced within the limits of practicability.

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* This is the twenty-fourth in a series of guest editorials by distinguished physicians and laymen.

The Surgeon General and the staff of the Library have a deep appreciation of the loyal support which you, the physicians of the District of Columbia, have always given the Army Medical Library. It has always been a great privilege and a pleasure to serve you. It is our desire to serve you better in the future.

COLONEL J. H. MCNINCH, M.C., U.S.A.
Director, Army Medical Library

HOSPITAL FACILITIES NEEDED FOR CHRONICALLY ILL

"While numerous communities are endeavoring to work out careful programs for control and care of chronic diseases, no important attempt to meet this problem has yet been made in the Washington area. This community is backward both in its study of the problems of chronic disease and in its provisions for the treatment and care of those who are chronically ill."

"Terms used to describe the present lack of facilities were 'heart-breaking,' 'unbelievable,' and 'disgraceful.'"

"The time has come for the community to give its undivided attention to providing adequate care for the chronically ill."

The above quotations were taken verbatim from the Health and Hospital Survey of Metropolitan Washington which was sponsored by the Washington Metropolitan Health Council and reported at the beginning of last year. Dr. Herbert Ramsey was Vice Chairman of the Council and numerous other Washington physicians were advisers.

The statements summarize Washington's outstanding medical need.

It is conservatively estimated that 10 per cent of the population suffer from chronic diseases other than tuberculosis and mental disease and that one tenth of these, or 1 per cent of the population, are chronic invalids. Converting this into the matter of hospital beds, it is estimated that 2.5 beds per 1,000 population should be available in Washington to care for the chronically ill (although other communities have found by actual count that a higher figure may be necessary). This would mean 2,092 beds for the District of Columbia alone and 3,185 for the entire Metropolitan Area. Since the state of Maryland already has plans for the construction of hospitals for the care of chronics, and the state of Virginia can reasonably be expected to follow suit, the District of Columbia is faced with an immediate need of about 2,100 beds, of which 525 should be hospital beds and 1,575 beds for long-term care. The former are entirely nonexistent, but to fill the latter need there are available 600 beds at Blue Plains, 180 at the Home for Incurables, and approximately 500 beds in voluntary homes for the aged. The picture is not brightened by the proposed hospital center since no provision is made in those plans for either short- or long-term care of chronics.

Because its membership has a particular interest in this, the Executive and Public Relations Committees of the Rheumatism Society have been giving considerable thought to the solution of this problem. Basically, it is mainly a matter of finances. The possibility exists that the Psychiatric Division of Gallinger may be released for the hospitalization of chronics while plans have already been drawn for the enlargement and modernization of Blue Plains. This, however, still leaves entirely unsolved and unplanned-for the large group of chronic sufferers who are able to defray all or a significant part of their expenses.

With a large hospital center planned, the most logical solution would appear to be a separate wing in this center. The purchase and complete renovation of one of the hospitals being vacated has also been suggested. Admittedly, the final solution has not been reached. But since every practicing physician almost daily encounters some aspect of the problem of hospitalization for chronics, all are asked to give the matter considerable thought and to offer suggestions.

Darrell C. Crain, M.D., F.A.C.P.

STREPTOMYCIN IN TUBERCULOSIS

Tuberculosis is a disease which is of tremendous importance to the residents of the District of Columbia, and any therapeutic measure which might aid in its management and control should be made available to every citizen in this community.

In 1946 the death rate from tuberculosis in the District was 62.3 per 100,000, almost twice the national average of 35.9 per 100,000. In 1945 of all the cities in the United States of 100,000 population or over Washington was second only to San Antonio, Texas, in the tuberculosis death rate. This stupendous relative death rate behooves all of us to fight for public funds to reduce it in every way possible.

Our citizenry "rose in arms" before Congress for funds for the Washington Chest X-ray Survey; they contributed generously to the District of Columbia Tuberculosis Association through the purchase of Christmas Seals and to the USPHS through taxes for this same purpose. We are in the midst of this study at the present time and early reports indicate that the estimated number of unknown cases of tuberculosis in the District was, if anything, somewhat conservative.

Today we have another fight on our hands. A drug has been discovered which is revolutionizing the end results in the treatment of tuberculosis. In 1939 Dr. Selman A. Waksman, while working on the antibacterial effect of metabolites of molds and fungi, discovered a substance obtained from the metabolism of a mold, *Actinomyces lavendulae* (called streptothricin). This agent, although found to be effective against Gram-negative bacteria, was too toxic for general medical use. Further investigation of the Actinomyces family, however, finally yielded in January 1944 a metabolite of the microörganism *Streptomyces griseus* that was more effective and considerably less toxic than any of the other antibiotics previously tested in the attack against the unconquered Gram-negative organisms.

Among the preliminary favorable experimental reports was that of Feldman and Hinshaw, who found it profoundly effective against tuberculosis in guinea pigs. Merck and Company was responsible at this time for recognizing its potentialities and for developing production of the drug in sufficient quantities for clinical use. Evidence was soon presented supporting the suppressive effect of the antibiotic on human tuberculosis.

The determination of the therapeutic effect of any drug on tuberculosis is difficult to evaluate because of the chronic course of the disease and its natural tendency to regress under conservative management. There is, however, no question regarding the effectiveness of streptomycin in several types of tuberculosis which were formerly almost always fatal.

The most comprehensive report available to date on the effectiveness of streptomycin in tuberculosis is that of the United States Veterans Administration covering a series of over one thousand cases, more than half of which have completed treatment. A summary of their conclusions follows:

The results obtained in the treatment of miliary and meningeal tuberculosis provide definite evidence of the antibiotic effect of streptomycin against the tubercle bacillus. The mortality rate of acute miliary tuberculosis was definitely lowered; however, when complicated by tuberculous meningitis the results were very poor. Streptomycin also favorably affects many exudative pulmonary lesions. This effect, however, is merely a suppressive one in that relapses occur in some cases when therapy is stopped. It appeared that the major place for streptomycin in the treatment of pulmonary tuberculosis is as an adjunct to other measures, especially in acute phases and in preparation for surgical procedures. Draining sinuses have been strikingly affected by streptomycin; many have dried up completely. Similar beneficial effects were derived in laryngotracheobronchial tuberculosis. The results were not good in tuberculous lymph nodes, bone and joint tuberculosis, and renal tuberculosis.

Although the toxic manifestations of streptomycin were frequently encountered when large doses were used (over 95 per cent developed vertigo), with doses of $\frac{1}{2}$ to 1 gram daily the incidence of toxic effects is extremely low.

The available reports therefore indicate that streptomycin has a specific effect upon the *Mycobacterium tuberculosis*. Since this has been proven to be the case it is hoped that municipal funds will be made available to all who cannot afford to purchase this relatively expensive antibiotic.

James J. Feffer, M.D.

In and Out of Focus

BY THE OBSERVER

AMA's Lawrence in Washington

Late in January, hearings were resumed by the Senate Subcommittee on Health and Education on the Wagner-Murray-Dingell bill (S. 1320) and the so-called Taft National Health Act of 1947 (S. 545). Mr. Isidore S. Falk, Director of the Bureau of Research and Statistics of the Social Security Administration, who had just begun his testimony when the Subcommittee abruptly adjourned last February, was the first witness. He was followed by his associate, Wilbur Cohen; Marjorie Shearon, adviser to the Subcommittee's Senator Forest C. Donnell; Dr. Maurice Friedman of Washington, and others. Except for Senators Donnell, H. Alexander Smith of New Jersey, Chairman, and James E. Murray of Montana, members of the Subcommittee showed little interest in the proceedings. Occasionally, Senator Claude Pepper of Florida would drop in. He livened things up a bit by taking sharp issue with his Republican colleagues or by directing pointed questions at witnesses. But usually Senators Smith, Donnell and Murray carried on alone.

The small hearing room was seldom filled with spectators. However, there were a number of regular attendants, the majority of them representing organizations. Those opposed to S. 1320 and more or less in favor of S. 545 represented medical groups. They, like those who took the opposite view, had become familiar figures at the hearings. Among the former were representatives of AAPS (American Association of Physicians and Surgeons), NPC (National Physicians Committee), and UPHL (United Public Health League). Of course, the AMA was represented by Dr. Joseph S. Lawrence, Director of the Washington Office of the Council on Medical

Service. As he is the subject of these observations his will be the only name mentioned of those who represent medicine in Washington.

"Joe" Lawrence, as he is known to his intimates, deserves some nice things said about him. He is, of course, the dean of medical representatives in Washington, having 24 years of legislative experience to his credit. Unlike many men long in service, his interest and enthusiasm have not been dulled. Few are more youthful in their outlook. He is forever seeking new facts or learning from others who possess information he doesn't have. What is most pleasing to those who are closely associated with him is that he wears well. He grows in stature as one gets to know him better.

Common sense and tolerance are very important attributes when discussing medical problems with public officials. For many of them do not see eye to eye with organized medicine. Some are openly hostile to the position it takes. Dr. Lawrence has shown the proper regard for their views, and his discussions with them are friendly and frank. Sometimes they come around to his point of view. But whether they do nor not, he earns their respect.

From time to time, criticism has been leveled at Dr. Lawrence because he is not aggressive enough. Physicians should not be deluded by such reports because Dr. Lawrence knows, as does any informed person in Washington, that he will accomplish little by being a belligerent advocate. Crusaders may cry to high heaven and raise a great rumpus, as some have done, but all they accomplish is to strengthen the resolve of their opponents. Dr. Lawrence goes about his task in a calm and quiet manner, making known the views of the AMA and the reasons therefor. As has been said, he may not win the support of the officials with whom he talks, but at least he earns their friendly regard, which may prove very valuable.

Your Observer, in common with some others, had misgivings when Dr. Lawrence first came to Washington. But these have been dissipated by his sound judgment and patience. Many men would have been tempted to throw in the sponge if they had run into some of the difficulties which confronted him. Fortunately, he took them in stride. Today, he is in a better position than any other representative of the medical profession in Washington to serve effectively.

The legislative bulletin issued by the Washington Office typifies Dr. Lawrence. It is dignified, informative, and well edited. Here is no flamboyance or hurling of thunderbolts. Stated in a readable manner are the facts, which speak for themselves.

From all of this, it should be apparent that your Observer considers Dr. Lawrence a worthy and effective representative of the American Medical Association in the Nation's Capital.

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Medical Manpower

Is this country threatened with a serious shortage of physicians? Experts disagree sharply as to the answer. Dr. Thomas Parran, who will shortly retire as Surgeon General of the United States Public Health Service, is one of those who find the situation alarming. In an address delivered last October before the Association of Medical Colleges, he said:

"I pray devoutly that you may be moved to train enough good doctors to take care of the needs of the American people—many more able private practitioners as well as many more able men who may specialize in teaching, research and public health. Or, if you now have not the facilities and resources to give a good medical education to a larger number of competent men and women, I wish that you could be moved to declare with a loud voice that somehow, from some source, the facilities and resources should be provided for you."

Public attention, he observed, was "increasingly drawn to shortages and maldistribution of doctors." This interest, he insisted, is not based on statistics but on the difficulty in many areas of obtaining the medical care which the people want and need.

Dr. Parran charged that the manner of producing doctors in this country is haphazard. "The number," he said, "has no relation to anything I can discover except the present physical and financial capacity of existing medical schools."

The argument that this country has the highest ratio of physicians per capita, he stated, is as inconsistent as to say the same regarding automobiles, radios, and many other things which people need. The extent to which people can purchase these necessities depends upon their economic status. "There is an important distinction," he said, "between effective economic *demand* and medical *need* for physicians' services."

What facts does Dr. Parran present to substantiate his claim that there will be a deficit by 1960 of 30,000 physicians? He offers a complicated formula based on the 1940 ratio of physicians to population, the requirements of all Government services, the needs of hospitals and health centers throughout the country, and various other factors.

To support his position, Dr. Parran quoted Dr. Victor Johnson and Dr. Fred C. Zapffe, whose study was published by the National Research Council in 1945. These physicians, he said, estimated the probable number of physicians needed after the War in addition to the number before the War at 35,000.

As to the future demands on physicians, he made these interesting observations:

> "The most imponderable factor in future estimates of need for medical manpower is the rate at which the American people will purchase medical care on a prepayment basis. Prepayment is the method sponsored by the American Medical Association, by President Truman in two health messages to the Congress, by leaders of both political parties in the Congress. The areas of disagreement are relatively small. They involve chiefly compulsory versus voluntary systems; medical control versus public control; Federal operation versus grants to the states; the income levels for the covered population. The great bugaboo of 'socialized medicine' should by now be buried since there seems to be general agreement on the major issue of group prepayment for medical care.
>
> "My own reluctance during many years to endorse a complete and immediately operative system of prepaid medical care has been based on practical administrative considerations rather than on ideological grounds. Foremost among these practical considerations is that we do not have throughout the country the health personnel to provide for the paying customers and their families the medical services of good quality which they would expect by reason of their prepayments. We lack facilities also, but the Hill-Burton Act has established a national policy and pattern of action designed to correct this deficiency.
>
> "I think we must assume that there will be national health legislation of some type in the not too distant future, designed to make more medical care available to more people. It follows that this will require more doctors, dentists, nurses and other trained personnel.
>
> "The increased average age of our population will create more demand per capita for medical service. No one has as yet calculated the size of this increment.
>
> "Universal military training has been recommended by a competent Presidential Commission and strongly supported in the light of the present world situation. Many doctors would be needed for such a program.
>
> "Likewise, we must consider the probable passage of a National Science Foundation Act with substantially increased public funds for medical research. The Steelman Committee concludes that the lack of scientific manpower is 'our limiting resource' in expanding a national science program. This committee recommends that we spend at least three times as much as we do at present on research in medicine. Although this committee has calculated the over-all number of additional science teachers for Ph.D.'s, the precise number of additional M.D.'s is not estimated."

What solution does Dr. Parran have to offer? "To increase the number of medical graduates, several procedures might be adopted," he says. "New schools are now being established or have been authorized in six states. The medical school of the University of Washington has just opened its doors. New full four-year medical courses have been authorized in the states of Missouri, North Carolina and California. In several other states, there is active planning for increasing medical education facilities.

"Many existing schools might, if they were financially able to do so, increase their facilities and add to their teaching staffs so that they could accommodate more students, although many of these schools have a prior need for an increased faculty to provide adequate teaching for their present students. Some of our strong schools might even create surplus faculty to colonize elsewhere, giving stability through nourishing the colony with the traditions, as well as the knowledge of the homeland. In this, we could learn much from the religious teaching orders.

"To broaden the source of applicants, scholarship programs might be established by the Federal or state governments to enable poorer students to compete for places in medical schools with those better situated financially.

"Special attention needs urgently to be given to increasing the training facilities for Negro students now limited to two institutions, plus 8 to 10 Negro students per year who are admitted to other schools.

"One means of increasing the proportion of doctors in rural areas would be to provide, through tax funds, special scholarships to students who will agree, on graduation, to practice in rural communities for a specified number of years. Maryland, Virginia, Mississippi and Indiana have laws to this effect, and a similar one was introduced in the 1947 session of the South Carolina Legislature.

"The Federal medical services currently are considering a system of scholarships for a sufficient number of medical students to ensure that their future needs will be met.

"Even with an increased output of present medical schools, other methods are needed to increase the available quantity of medical service. These should include the more economical use of the doctor's time. Medical practitioners might use the services of medical technicians more widely in some of the more routine technical services, saving precious professional time for serious cases.

"A great contribution toward higher medical standards could be made by the increased use of group practice. Group organization of medical practice on a wide scale, enlarging opportunities for consultation among doctors and specialists by cutting down the cost to the individual doctor of essential equipment, undoubtedly could elevate standards of medical care. Group medical practice successfully reaching all sections of the population would have to be accompanied by prepayment.

"Even with such economies in service, even by increasing the output of existing schools, even with the increment of currently projected schools, I do not believe we shall meet the quantitive needs. Moreover, as the costs of medical education continue to rise and larger private sources of funds for the support of medical schools do not appear, an agreement as to total need for physicians and the public aid required in the financing of their education seems necessary. It is on this central point that the Public Health Service seeks your counsel.

"We should act with dispatch, since some early public actions seem likely. We need to reach professional agreement on the sound bases for such action. Such agreement was reached in formulating a national policy and program of hospital construction, which should provide needed health facilities.

"Can we not agree also on a national policy and program designed to provide the needed health personnel? In doing this, we shall have determined for the first time the place of medical education in American life."

Dr. Victor Johnson, Director of the Mayo Foundation for Medical Education and Research, took exception to the statement that he was in agreement with Dr. Parran's views. He said:

"If Doctor Parran's current estimates are as bad as ours were two years ago, there is no need for further discussion. The figures to which he referred were presented in testimony before the Senate Military Affairs Committee urging passage of the Ellender Bill . . . which provided for the deferment of qualified premedical students. It came when the supply of premedical students was being cut off by the policies of the military forces and the Selective Service system. At the time of this Senate testimony, the end of the War was not yet in sight, and the estimates included large numbers of doctors for military needs. The unexpectedly early termination of the War and the unforeseen rapid demobilization of the military forces have resulted in far fewer physicians being required for the military forces and even for the Veterans Administration than was anticipated earlier. Less than half of the numbers estimated for these services are now actually on active duty. Therefore, I am decidedly not in agreement with Doctor Parran's estimates."

He complained that Dr. Parran's statements "coming from a high authority have aided and abetted reckless adventures in medical education without competent leadership, adequate facilities, or sufficient funds." Dr. Donald G. Anderson, Secretary of the AMA's Council on Medical Education and Hospitals, took about the same view.

British Doctors Rebel In an effort to organize "militant opposition" to the Government's nationalized medical plan, the British Medical Association has just concluded a nation-wide plebiscite among its 56,000 members. The result, announced February 18, makes it clear that British physicians are not only opposed to the plan, but that most of them are determined not to coöperate when the Health Service Act becomes effective on July 5. Of the doctors in all categories, 89.5 per cent, or 40,814, disapproved of the Act and 10.5 per cent, or 4,735, favored it. Among physicians who would be expected to provide the service, 86 per cent voted against participation. Having thus challenged Minister of Health Aneurin Bevan to make the scheme work, these physicians plan to continue to treat patients and request payment for their services. If it is not forthcoming, treatment will be given free. BMA proposes to raise a "hardship fund" to aid doctors who are unable to collect their fees.

On the other hand, the Government and pro-Labor physicians believe that before the Act is due to become effective, many doctors will change their minds. All but about 1,000 of the country's 20,500 general practitioners now participate in the medical insurance scheme instituted in 1911. The Government is confident that economic necessity will drive most of them into the new plan.

The Act provides that the Government shall pay everyone's doctors' bills, large or small. It is much more comprehensive than the various health schemes which have been proposed in the United States. Under the British system, people will have free choice of physician as long as he is registered under the Act. As is customary under such a system, lists will be published in various communities and the people may select their own doctor. If a physician isn't registered, patients may still go to him, but they must pay his bill themselves. Where the patient and the physician are both in the system, the former may call the latter to his home, or go to the physician's office with no limit on the number of treatments for the illness from which he suffers.

Included without charge to anyone, except, of course, the taxpayer, are services of specialists and consultants and also home nursing.

Hospital care is provided when ordered by the physician for as often and as long a period as necessary. Private rooms are not available under the system unless medically necessary. All the hospitals will come under Government control when the Act becomes effective.

Drugs, eyeglasses, hearing aids, crutches, and appliances are provided upon prescription of the doctor.

Each participating physician will be paid a basic salary of $1,200 a year. In addition, he will receive $3.03 annually for each of his patients entitled to service under the system. On this basis, he would earn approximately $8,775 if he had 2,500 patients, and $13,320 if he secured 4,000.

Physicians object strenuously to this method of compensating them, arguing that their income should depend on the number of patients rather than a guaranteed base plus a limited annual fee for patients. The BMA is also fearful that the salary base will lead to state medicine and the complete elimination of private practice.

Minister of Health Bevan scoffs at the idea. He says that doctors who want to can stay outside the system and practice privately. But the physicians are dubious that they will be able to make a living in the face of a vast Government system of "free"medical care.

Sale of doctors' practices is a very controversial issue between the doctors and the Government. In the past, physicians have sold practices which they built up over a considerable number of years at what they considered a fair value. However, under the Government's program, such transactions will be outlawed.

Other points on which the BMA and the Government disagree are the Health Minister's authority to refuse to register doctors in areas it regards as being oversupplied with physicians; that admission to the plan shall be at the discretion of the Government; and that it shall have the right to expel physicians from the system for inefficiency. The Act now provides that a complaint against a physician shall be heard by a tribunal appointed by the Health Minister. Appeal must be taken to the Minister of Health rather than to a high court, as BMA believes it should be.

The manner in which the struggle is finally resolved holds more than ordinary interest for America's physicians. If a sufficient number of practitioners go along with the leaders of the BMA, the Government, of course, will be in a bad fix. Compromise may then be resorted to. On the other hand, if the medical profession fails to stand up under the pressure which will be placed on them, the Government need have little concern for the future of its program. In any event, the plight of the British doctors is not a happy one.

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The Parking Problem

In every city of any size, the parking problem is the number one headache. Washington is no exception. In fact, conditions in the Nation's Capital are about as bad as can be found anywhere. Unfortunately, the solution here as elsewhere seems far distant.

Like other people who, because of their occupation, must drive their cars in congested areas, doctors have found parking more or less a nightmare. Fortunately, the situation was alleviated for physicians in the District of Columbia when the District's Traffic Director and the Metropolitan Police Department granted parking privileges to members of the Medical Society when on emergency calls. This arrangement has assured the people of Washington that they will receive prompt medical attention in their homes. No longer is it necessary for the physician to drive blocks out of his way in search of a parking place. He is now privileged to park in specified no-parking areas so that he can make a call with the least possible delay.

The Society itself has a parking problem which, for the present at least, it is unable to solve. For the area surrounding its building at 17th and M Streets is about as congested as can be found in the District of Columbia. Consequently, physicians who wish to attend meetings are forced to devote from a few minutes to an hour or more looking for a place to park their cars. Not only is there no parking space on adjacent streets, but parking lots and garages are often jammed to capacity. It was thought for a time that a parking lot could be obtained from a nearby organization for members attending evening meetings. This has not materialized. If any member has any practical suggestions to offer which would alleviate this situation, they will be heartily welcomed by officers of the Society.

Among the proposals which have already been made is that the basement of the Society's building be converted into a garage. This is impractical for several reasons, one being that there would be space for too few cars to warrant the investment necessary. Then too, it has been proposed that the Society's property be disposed of and that it build farther out where there is more parking space. This does not seem feasible for many reasons, one of the most important being the sentiment which attaches to the present building. Then, too, a comparable building could not be built at anywhere near the cost of the original. So it seems that despite the seriousness of the parking problem as it affects the Society, nothing can be done for the moment.

Physicians in other cities have, in some respects, not fared so well as their fellow practitioners in the District of Columbia. Dr. James J. Lightbody writes in the January 5, 1948 issue of the *Detroit Medical News:*

> "One of the reasons some physicians don't like to make house calls is that after you get to the house or apartment, there is no place to park within six blocks,

so they occasionally have to nudge themselves into a small no-parking place—later to come out to find one of those cardboard tickets firmly wired to the door handle.

"It is getting more and more difficult to find a place to park around hospitals. After you have made the supreme effort to get a patient in the hospital, you chug happily down the slippery streets to see that one patient—and what do you find—no place to park—except in those commercial parking lots that have sprung up so conveniently close to the hospitals. Someone suggested that if it wasn't for the fact that all of the maps would have to be changed, we could drain Lake St. Clair, the Detroit River and Lake Erie and sell it for parking space. That wouldn't be a good idea, however, because that would eliminate the plans for that beautiful river front drive—which this generation will never see.

"One of our greatest brain childs to outwit the uniformed gents who prowl up and down busy streets putting white chalk marks on your tires was to have a portable water hydrant painted a nice bright red and leave it in a nice handy spot close to your office—naturally nobody would park within twenty feet of it—so when you come along to back your jalopy into this restricted area—you calmly pick up the water hydrant and put it in your car—and go about your business—several hours later when you come back and leave your private nesting place—you drag out the portable fire plug and place it back on the grass near the curb—and there you have a daily reserved parking place. In case of a fire however—oh well, we'll let the firemen worry about that."

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On Being a Poor Speaker Writers of the how-to-win-friends - and - influence - people school have always enjoyed a considerable popularity, but their vogue was never greater than at present. Although their writings cover a wide field, the pattern is usually the same—inspirational examples of accomplishment and how they can be duplicated. On every list of best sellers, there is a goodly number of self-improvement books.

A refreshing variation of this time-worn formula appeared in the *Scientific Monthly* for January 1948, entitled "The Principles of Poor Speaking." The author, Harold F. Harding, Editor of the *Quarterly Journal of Speech*, observes that it is "fairly easy" to write or to speak well, but to do it poorly is another matter. That requires study and hard work.

For the guidance of his readers, Mr. Harding lists the following "principles of poor speaking":

1. Make no preparation in advance.
2. Give the speech no order; let it ramble.
3. Avoid a conclusion.
4. Mumble your words and don't look directly at the audience.
5. Never analyze an audience and never evaluate your performance.

"Preparation is irksome and time-consuming," Mr. Harding says. "Therefore, don't prepare until the night before you are to deliver the speech. Better still, give your speech impromptu and do your preparing on the spur of the moment. A sensible plan is to give again a ten-year-old lecture without revision."

"Read your speech, it's far more scholarly; don't try to master its ideas in outline form—that's the surest way to keep your audience awake. Whenever you read from manuscript, don't read it aloud beforehand. This will enable you to speak with your nose close to the manuscript. If you do weaken and speak extempore with the use of notes, don't go through the speech in advance; above all, pay no attention to any set time limit. If you use up your allotted time in the introduction, you can always invade the time of the rest of the program. This adroit maneuver will serve to delay the proceedings, and it will certainly cause people to remember you as the speaker who was full and flowing over.

"Modesty is old-fashioned, so use 'I' frequently. The word 'my' at the beginning of successive sentences always attracts attention."

"If a public-address system is available, avoid it. If one is not available, complain that you cannot speak decently without one; then proceed in a slow monotone. If you speak before a microphone and to a radio audience, let the audience before you go hang. Your outside audience is greater and, naturally, far more important.

"As for tempo, or speaking rate, try to cultivate extremes of either 75 or 200 words a minute. Avoid 125 words per minute—it's a dull rate, and, if you should enunciate distinctly, you gamble on having your hearers understand individual words.

"If you have a specific purpose, conceal it. When you use charts or diagrams, make them small and the lettering faint. Talk to the chart rather than to the audience. If you use slides or film strips, make certain that the projector does not function. This will allow you to make small sketches on the blackboard with your back to the audience while you talk in a low, confidential voice.

"Writers of textbooks on speaking always harp on 'conversational quality.' It's a flat failure in poor speaking. To succeed, either talk to yourself or make an oration. Conversing directly with the audience is just another one of those impractical modern theories."

"Insult your listeners. Either explain theories with which they are already familiar or tell them they wouldn't understand if you did explain. After all, they can always read your book if they want real enlightenment.

"Do not exert your lung power. If you wish to succeed, speak so that the man in the back row wishes he were in the front row, the man in the front row wishes he were on the platform, and the man in the middle of the room wishes he were back home. This is known as complete coverage."

"Stretch out the speech. Repeat your points. Present the same idea in any number of different ways. Then backtrack and start all over. Never organize your speech—it's too confining."

"Whenever possible use anticlimactic order. For making a reputation, there is nothing like letting down your listeners. Aristotle says that a speech should have a beginning, a middle, and an end. He was right about the first two parts, but the best poor speeches really have no end. Those who unload them just go on and on. The past masters cultivate the false, or pseudo, conclusion. You, too, can temporarily arouse your audience with such phrases as 'In conclusion,' 'To summarize,' 'To conclude briefly,' 'Let me now restate,' 'I want again to recapitulate.' "

In conclusion, Mr. Harding describes the poor speaker as "the inadequate man with nothing to say who nevertheless can painfully consume 30–60 minutes of an audience's time without profit and without the slightest qualm of conscience."

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Don'ts for Writers

Having presented a negative view of public speaking, it would seem profitable to add a less novel, but nevertheless effective approach to writing.

In preparing this month's column, your Observer's attention was attracted by a "paper" appearing in the *Mississippi Valley Medical Journal* entitled "Getting Down to Brass Tacks for Writers of Science Articles." The author, Frank Luther Mott, Dean of the School of Journalism of the University of Missouri, in an address before the Mississippi Valley Medical Editors' Association, gave his listeners some sound advice well worth repeating, especially for physicians who write for lay consumption.

Dr. Mott* lists the following "don'ts" for science writers:

"Don't overestimate the reader's knowledge. Of course, he does not know as much as you do about the subject on which you are writing; that is the reason you are writing this article. But on the other hand DO NOT UNDERESTIMATE THE READER'S INTELLIGENCE. He does not have your specialized knowledge but he is probably just as bright as you are. . . .

"Don't try to tell all you know in one short article. Leave some over for another time. . . .

"Don't think that because a thing is old to you it is known to the general public. Whatever is new to your readers is 'news'. . . .

"Don't imagine that your readers are obliged to give attention to you no matter how dull you are. I can force them to do that in the classroom but you can't do it in a newspaper or magazine, or on the radio. It is too easy to turn the page or the dial.

"Consequently, you must interest your readers from the first word. If you don't put your best foot forward you won't have a chance to use the other foot. . . .

"Therefore, it is important to study introductions or 'leads.' A good plan is to go over in your mind the material of your article and then ask yourself, 'What is the most striking or attractive bit from all this material?' Then fix upon that for your lead. . . .

"Don't leave out the human interest. Your reader is a human being even if you are only a scientist. Human interest is anything that is interesting to the average human being, not because of its great particular significance, but because it has an application to the human values which mean so much to everyone. . . ."

"Don't think that you can make your article more attractive by tricking it out by irrelevant jokes, or extravagant language, or bits of poetry, or references to mythology. . . .

"Never say, 'This discovery is interesting.' If it is, the fact will be self-evident and you do not need to insist upon it. The whole point is that you must make your presentation interesting. If you succeed, you don't need to make any idle remarks about it; success is its own advertisement. . . .

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* Dr. Mott states that his advice is based on suggestions made to contributors to *Science Service* by the late Edwin E. Slosson.

"Never say that you can't find anything to write about. Every number of a good scientific journal contains material which may be made interesting and valuable to a popular audience. . . .

"Don't bother giving exact citations or bibliographical references to the literature of the subject on which you are writing. Be sure to give proper credit, informally, to your source, however. Also, it is often a good thing to give your reader a hint as to where he can read more widely about the things you are discussing.

"Beware of fancy introductions. It is nearly always a bad plan to use an historical introduction. The old classical injunction was to begin in medias res—in the middle of things. . . . Most manuscripts by beginning writers may be improved by cutting off the first paragraph or the first page. . . .

"Don't shoot in the air. Aim at somebody. You may miss him, but you are more likely to hit somebody else than if you aim at nobody. . . .

"Don't refer too closely to notes or to books while writing. If you are not yourself interested enough in your material, and sufficiently master of it, to sit down and write without meticulous attention to notes and authors, then you had better give it up in the first place. . . ."

"Don't define a hard word by a harder word. Vladivostok is a hard word, but when a press correspondent arrives at Vladivostok he goes right inland without stopping to explain that 'this is a city south of Khabarovsk and east of Tsitsihar.' So you, if you want to say 'calorie,' say it, but don't make it worse by 'explaining' it as the 'quantity of heat necessary to effect a rise of temperature of one degree centigrade of a cube of water each dimension of which is one-tenth part of the length of a bar of platinum and iridium alloy lying in the observatory of St. Cloud.' . . . Don't think that you must leave out all the technical terms. Use them whenever necessary without apology and, if possible, without formal definition. People are not so easily scared by strange words as you may think . . . the ordinary reader does not need the dictionary. He gets the meaning from the run of the story, for the story is so written that he will get the meaning as he runs."

T. W.

REPORT OF SENIOR DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION

The Interim Session of the House of Delegates of the American Medical Association, held in Cleveland, January 5–6, was the first session planned especially in the interest of the general practitioner. The ever-changing problems confronting the profession were accentuated as well as ways and means for effecting solutions. The establishment of an Interim Session of the House of Delegates is a step in the right direction. It will undoubtedly prove more and more valuable by making the Association a more closely knit body, with the rank and file taking more responsibility for its policies and management.

It is recommended that all should familiarize themselves with the report of the Board of Trustees on the progress made in promulgating the ten-point National Health Program. An awareness of the details and extent of this work will assist members in combating propaganda issued by those agencies which want larger bureaucracies with total control of the practice of medicine.

Of much significance was the report on the meeting of the World Medical Association, held in Paris in September. Dr. E. L. Henderson, Chairman, and Dr. L. H. Bauer, Trustee, attended as Delegates, with Drs. E. E. Irons and R. L. Sensenich as Associate Delegates. Forty-eight nations were represented. It was announced that the headquarters and general secretariat will be located in New York City. Agenda included reports on surveys relating to the status of the physician and medical practice and medical education and licensing in all countries. September 18, 1947, the date of establishment of this organization, may well mark the beginning of better relations between the medical professions of the various nations.

Your Delegate served on the Reference Committee on Medical Service. Action was taken to coöperate with the American Red Cross in the establishment of blood banks throughout the country. At a hearing appeared some opponents who already were operating satisfactory blood banks. Approval of a resolution adopted in Atlantic City was recommended with the important proviso that the Red Cross accept a medical advisory committee from the AMA. This recommendation was later adopted by the House.

Of high significance was the awarding of the first General Practitioner Medal to Dr. Archer C. Sudan of Kremmling, Colorado. This belated tribute shows a healthy trend against the current of over-specialization with the ever-increasing possibility of limiting hospital facilities to specialists.

Tribute was paid to the memory of two stalwarts in the cause of organized medicine who had recently passed on—Dr. C. W. Roberts and Dr. Holman Taylor.

Respectfully submitted,
C. B. Conklin, M.D.
Delegate

REPORT OF JUNIOR DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION

The official minutes of the Interim Session of the House of Delegates held in Cleveland, January 5 and 6, will be found in the *Journal of the American Medical Association* for January 17 and 24, 1948, pages 181 and 257, respectively.

In addition to the matters mentioned in the report of the Senior Delegate from the District of Columbia there may be general interest in the items mentioned below.

Status of Interim Meeting. Several delegates in private conversation questioned the need for the Interim Session of the House in view of the expense and trouble involved but the consensus appeared to hold that too much of importance could arise between annual sessions to permit such a long interval without the opportunity of receiving reports from the Board of Trustees and of issuing fresh instructions to it.

Increase of Dues. The increasing number of services performed by the offices and bureaus of the American Medical Association at the instruction of the House of Delegates, and the steadily increasing costs of all services have combined to throw the budget of the Association out of balance. Necessity for increased revenues has resulted in an increase of advertising rates in the *Journal* and at this session the House of Delegates passed a resolution raising the annual fellowship dues from $8.00 to $12.00 (including the *Journal*) and similarly raising the subscription price of the *Journal* to non-fellows.

Medical Service Plans and Blue Cross. It was reported that some differences of opinion on various points had arisen between the members of the Association's Council on Medical Service and some of the members of the Board of Directors of Associated Medical Care Plans, Inc. (The latter is the corporation set up by the American Medical Association to integrate and coördinate the various voluntary prepayment medical service plans throughout the country and to set up standards for and to encourage development of new plans in areas not already covered.) In private conversation the undersigned advised some of the principals in this matter that it was their responsibility to medicine and to the public to resolve these differences quickly and that the differences were minor compared to the over-all picture and did not involve fundamentals. He further emphasized that the proposal to set up a joint board of control for Associated Medical Care Plans and the National Blue Cross was a logical development and that selection of Major General Paul R. Hawley as general director of this joint effort should result in signal accomplishment. It should be noted that one of the pressing reasons for such a centralized arrangement was the necessity for having a focal point through which could be channeled the contracts between various medical care plans and various Blue Cross plans, on one hand, and, on the other, large industrial employers whose personnel might be scattered through numerous states and municipalities.

Immigrants and Contagious Disease. A resolution was passed calling for a more strict examination of immigrants, potentially carriers of contagious disease, and directing the American Medical Association to make suitable representations to "Congress, the United States Public Health Service and the proper immigration authorities." The resolution indicated the need for "adequate and reliable physical examinations, including X-ray examination of chest, prior to and as a condition of admission to this country," and that if this could not be realized the immigrants "be so examined at the proposed port of entry."

Election of Speaker. It was learned with regret that the able speaker of the House of Delegates, Dr. Roy L. Fouts of Omaha, had stated that he would not stand for reëlection at the Chicago meeting of the House of Delegates next June.

Election of Trustees. Three vacancies in the Board

(*Continued on page 190*)

THE MARYLAND DOCTOR AND THE MEDICAL CARE PATIENT

V. L. Ellicott, M.D., Dr.P.H.

Health Officer, Montgomery County, Maryland

Maryland now has two Medical Care Programs, one which started in the counties in 1945 and one in Baltimore City in 1947.

Program in the counties.—The doctors, dentists, druggists and others are now familiar with the routine. From the beginning they have given excellent coöperation. The story of each patient usually begins when the patient comes to the doctor's office and presents a small white identification card. This means that he is considered unable to pay and that the physician is expected to serve him without charge. At the end of the month the physician fills out a bill form encircling the dates on which the patient made office visits, or received other service, signs and mails it to the County Health Department. One bill is used for each patient for each month. Bills are forwarded from the County to the State Health Department and checks, based on a statewide fee scale, are mailed to the physicians in one or two months' time.

These patients are variously known as "Medical Care," "Certified," "Health Department," or "State" cases. If for any reason a physician is not willing to treat one of them, he is at liberty to decline. There is also freedom on the part of the patient to choose any doctor who will accept him. Very few have not served at least an occasional patient in the $2\frac{1}{2}$ years since the program started.

Patients are entitled to a variety of services besides visits to doctors' offices. If they are not ambulatory, they may have home calls. They may have drugs, either given out from the doctor's shelves or obtained from pharmacists by prescription. Doctors use a state prescription form. The patient takes it to a druggist who fills it without charge. A copy of the same prescription form is later used as the druggist's bill to the State Department of Health. Dentists' services are provided in a way similar to physicians'. Metabolism tests, electrocardiograms, X-rays and other laboratory services are included. Artificial limbs, eye glasses and similar appliances are not included in this program but are sometimes available through other plans. A few counties have authorized physicians' services to patients in hospitals, but bills are infrequently submitted. Hospital care itself is not included, but existing plans for care through Welfare Board certification are being continued.

The present fee schedule is, in part, as follows:

Physicians' office visits	$2.00
Physicians' home visits (night $4.00), day	3.00
Obstetrical care	35.00
Refraction by ophthalmologist	5.00
Consultation by specialist	10.00
Dental fillings	2.00 & 3.00
Dental extractions, first tooth	2.00
" " , each additional tooth	1.00
Dentures, upper or lower $35.00, both	60.00

When more than one patient is seen at a home visit, the fee for each additional patient is $1.00. A small travel allowance is granted for home visits of ten miles or more. The obstetrical patient must receive prenatal and postnatal care from either the physician or a clinic. Dentures are allowed only on prior authorization.

Patients certified for Medical Care fall into two groups, the indigent and the medically-indigent. The indigents are those already receiving some form of public assistance. They are certified by County Welfare Boards. The medically indigent are not receiving assistance but are within the following income scale:

NUMBER OF PERSONS IN THE HOUSEHOLD	TOTAL ANNUAL HOUSEHOLD INCOME
1	$1,000
2	1,200
3	1,400
4	1,600

For larger households $200 is allowed for each additional member.

For the medically indigent, certification frequently begins in the doctor's office. When the patient's inability to pay is discovered, the physician and patient make out an application which the patient signs and sends to the County Health Department. The Health Officer either approves this on the basis of the information given or secures additional information. In Montgomery County the local public health nurse, working out of a community health center, is usually the one who does this. The identification cards (good for services from any allowable source) are issued by the County Health Officer. The physician is expected to treat the patient pending certification.

In Montgomery County medically-indigent patients make up slightly over one half of the total. In most other Maryland counties the indigent group predominates. The total number served constitutes less than 1 per cent of the population. Office visits outnumber home visits and the two combined are now constituting four fifths of all the expenditures under the program.

The Baltimore Plan.*—The plan for Baltimore City was started in 1947 and differs from the plan started in 1945 in the 23 counties. Baltimore includes only welfare clients. The city is divided into sections surrounding medical centers. The center, when practicable, is a part of the outpatient department of a hospital. Each welfare client, when accepted for public assistance, is referred to the medical center for comprehensive medical service. If the welfare client has a family physician, he is instructed to continue the physician's services. If he has no physician, he chooses one from a register of physicians who have expressed a willingness to participate. In both instances the center informs the physician of the client's registration and asks the physician's cooperation in furnishing comprehensive medical service to the family. The center is responsible for seeing that an adequate initial examination of the physical status of the client is made and that the client's physician receives a copy of the findings. The program aims to develop teamwork between the medical center and the participating physician.

Payment for services of the medical center is based on the number of public assistance clients assigned to it. Payment to the participating physicians follows the same principle and is based on the number of clients selecting the physician for service. The budget for the program for the first two years is approximately $400,000 per year and is derived from state tax funds.

Comments.—Since the writer has participated only in the County plan, he will comment on the Baltimore plan only to the extent of expressing admiration for the concept of teamwork between medical centers and practitioners.

ARE YOU INTERESTED IN GROUP PRACTICE?

Several years ago the Medical Society created a Subcommittee on Group Practice, anticipating a widespread interest in group practice after the War. Only one large group has been formed in Washington recently, although smaller groups have existed for many years, particularly within a given specialty.

The purpose of this announcement is to acquaint newer members of the Medical Society with the existence of the Subcommittee. Should anyone be interested in forming or joining a group, the Subcommittee stands ready to assist in an advisory capacity. It is not its function or its desire to encourage actively the trend to group practice, as this is entirely a personal matter with the interested physicians; however, the files of the Subcommittee are at the disposal of anyone wishing to examine them.

VICTOR R. ALFARO, M.D.
Chairman, Subcommittee on Group Practice

The program in the counties has demonstrated the practicability of administering medical care programs by County Health Departments. At present no other state has a plan of this kind. It is possible in Maryland principally because every county has an organized health department with a full-time health officer. Health Department administration provides the necessary administrative staff of clerks and public health nurses. The health officer gives medical direction to the program. This avoids the conflicts which have so often developed when professional men are forced to serve under lay leadership. Physicians and dentists are well represented on the State Advisory Council and the County Committees of the program and are therefore assured of reasonable fee schedules and other policies. The Maryland plan is also based on the premise that the quality of care should be maintained by improving the available diagnostic and therapeutic facilities, including consultations, rather than by direct supervision of service. One of the best features of the program is that it was conceived and established through the efforts of the State Medical and Chirurgical Faculty.

(*Continued on page 190*)

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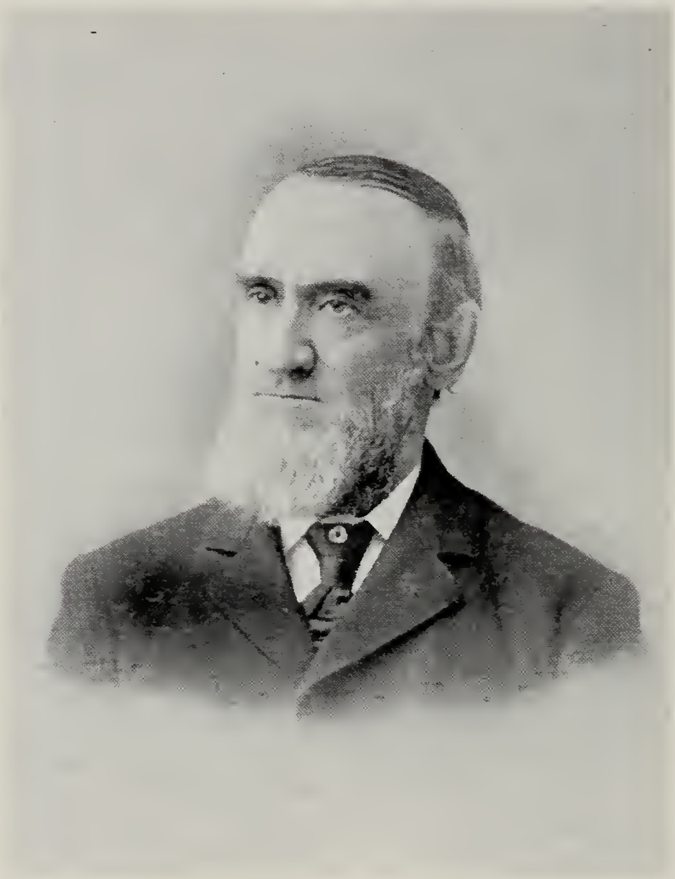
*Based on *Baltimore Health News* (Baltimore City Health Department), January, February and March 1947.

Washington Physicians of Yesterday



THOMAS CROGGON SMITH, M.D.

Members of the Medical Society whose memories reach back toward the beginning of the century will not have forgotten the small group of men who unfailingly attended the meetings and always sat together in the front row of seats intently following the proceedings. They were the elder statesmen, the stalwarts, the "Old Guard," the survivors of that group of men of force and ability who through the previous third of a century had established and maintained the scientific and idealistic character of the Society and brought it to its present state of achievement and solidarity. Their activity in the Society dated back to about 1864, when, after a half century of merely perfunctory and unproductive transactions, the beginners of that group (which included Dr. Smith) instituted the active and frequent presentation of scientific papers, and, with other kindred spirits later admitted to membership, made the Society a genuine and effective scientific forum. Most of the members who were active in this movement have been previously memorialized in this series of sketches about past distinguished physicians of Washington; but among them Dr. Thomas Croggon Smith was not the least deserving of commemoration.

Born in Washington, August 16, 1842, Dr. Smith received the degree of M.D. from Georgetown University in 1864. After graduation he entered upon, and for the remainder of his life engaged actively in, the practice in Washington of

(*Continued on page 190*)

SCHEELE SUCCEEDS PARRAN AS NEW SURGEON GENERAL OF USPHS

Dr. Leonard A. Scheele has been nominated by President Truman as Surgeon General of the United States Public Health Service to succeed Dr. Thomas Parran, who will have completed 12 years of service in that post on April 6, when his present term expires.

Leonard A. Scheele, M.D.
New Surgeon General of USPHS

Dr. Scheele, a native of Fort Wayne, Indiana, received his A.B. degree from the University of Michigan in 1931, and his degree in medicine from Wayne University, Detroit, in 1934. Commissioned in the USPHS the same year, he held several field positions until 1937, when he became a Special Fellow at the Memorial Hospital, New York, where he remained for two years.

In 1939 Dr. Scheele was placed in charge of the National Cancer Control Program of the National Cancer Institute. In this capacity he was concerned with studies in epidemiology of cancer, in end-results of cancer treatment, and in liaison with the states and various medical organizations on cancer control.

He was transferred to Civilian Defense in 1942, and was assigned to the Army from 1943 to 1945, during which years he served in Military Government and Allied Commission medical operations in Sicily, Italy, and Germany.

The military decorations he received included the American Typhus Medal for his work in Northwest Europe during 1944–45; the Legion of Merit for outstanding work in controlling communicable diseases in the European Theater of Operations; the Order of Public Health, from France, and several other foreign decorations.

In 1946 he returned to the National Cancer Institute as Assistant Chief, and in July, 1947, was appointed Assistant Surgeon of the USPHS and Director of the Cancer Institute.

Dr. Thomas Parran became Surgeon General of the USPHS in July, 1936, succeeding Dr. Hugh S. Cumming. During his many years in office he has been credited with a number of notable achievements, a few of which are mentioned below.

Although the Public Health Service had been doing cancer research for a number of years, it was not until 1937, when the National Cancer Institute was established, that a truly national cancer program came into effect. Today a large part of the Institute's research expenditures goes for grants-in-aid for research in universities, hospitals and other institutions.

Thomas Parran, M.D., F.A.C.P.
Retiring Surgeon General of USPHS

In December 1936, shortly after he became Surgeon General, Dr. Parran called a conference to correlate knowledge of venereal disease on a national scale and to crystallize plans for a central program.

An educational campaign for the public was drawn up, and in May 1938 the Congress passed the Venereal Disease Control Act, authorizing the Public Health Service to give grants to states for the development of control programs.

The United States Cadet Nurse Corps was established, which was credited with preventing the collapse of civilian nursing services during the War.

In order to attack most effectively the many problems in tuberculosis control, the Public Health Service employs four principal technics: aid to states; demonstration and service, including assistance with mass X-ray surveys of entire cities and counties; research; training of professional personnel. Every state now has a planned control program and 45 states have full-time tuberculosis officers.

The research program of the National Institute of Health has been gradually expanded over the years. Late in 1945 the Public Health Service launched a Federal program to provide grants-in-aid for research to public and private institutions. The program is planned and directed by 250 of the Nation's top civilian scientists for the purpose of furthering the research which they consider most essential to the improvement of the Nation's health. More than $11,500,000 has been awarded in grants for research work, with over 1,000 scientists in more than 200 institutions sharing in the money.

Under the national mental health program, authorized by Congress in 1946, approximately $400,000 will be spent during the fiscal year 1948 for research. Over $1,000,000 will be spent this year for grants to public and other non-profit institutions for the development and improvement of facilities for training mental health personnel.

A sum of $3,000,000 is appropriated for grants-in-aid to states for local mental health programs. The ultimate goal is the establishment of one out-patient mental health clinic for each 100,000 of the population and provision of services to sparsely settled and rural areas through traveling clinics.

With the passage of the Hospital Survey and Construction Act, there was promulgated a broad program of assistance to states in providing hospitals and health centers distributed in proportion to need. Under the Act, an appropriation of $3,000,000 for survey and planning and $75,000,000 for construction annually for five years was authorized.

Dr. Parran took a leading role in establishing the World Health Organization. He is the United States representative on the Interim Commission of the WHO, which met in Geneva, Switzerland, in the fall of 1947.

He is also a prolific writer. His book, "Shadow on the Land," was published in 1937, and he is the co-author of "Plain Words about Venereal Disease," published in 1941.

APPOINTMENT OF COMMISSIONED OFFICERS IN NAVAL MEDICAL CORPS

The statutory authority contained in Public Law 365—80th Congress, Title II (Army-Navy-Public Health Service Medical Officer Procurement Act of 1947) makes it possible now for civilian doctors to become commissioned officers in the regular Navy, provided they meet the professional and physical qualifications. This law is unique in that it does away with, for the first time, the age limitation of 32 years of age and permits doctors in civilian practice to enter the Navy and be commissioned with the rank up to and including Captain. The law considers all strata of the medical profession, internes, residents, reserves, former medical officers who have resigned, and present practicing physicians.

In order to make application a doctor must be a citizen of the United States, a graduate from a Class A medical school, and have served at least one year's internship in an approved hospital. Candidates will then be judged on a number of qualifications such as being a member of a specialty board, his teaching connections, the number of years of professional or scientific practice, hospital or laboratory connections, a statement of military service, etc.

The allocation of rank to successful candidates will depend upon their academic age, professional standing, and experience in the medical field. Successful candidates will then be integrated in line with medical officers of the regular Navy and assigned running mates accordingly. This means that they will be eligible for promotion along with their fellow officers of equal rank.

This law offers a fine opportunity for civilian doctors to make a career in the regular Navy and to enjoy its professional advantages as well as its retirement benefits. Doctors interested in such a career should write to the Bureau of Naval Personnel, via the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

CITIZENS OF THE WORLD

In time of stress and trouble, people have a saving habit of forgetting differences, petty and large, and uniting in meeting the pressing demands of the emergency of the moment. The people of the United States, reacting to the urgencies which burst upon them at Pearl Harbor, drew together as never before, found strength in unity, and set out resolutely to pursue their common objective—victory.

Nearly three years after victory, the world still pays the high price of war. Its peoples, weakened and handicapped, suffer the debilitating strains of hunger. Millions of children, victims of malnutrition and worse, face no certainty save that of death.

Hopefully the emergency finds the forces which tend to draw men together at work again. As winter stiffens and distress grows, so grows the determination to resist, and in this determination there are the seeds of human unity, the seeds of true world citizenship.

The people of the world, through the United Nations, have set up the International Children's Emergency Fund as a means of saving at least the children from the creeping paralysis which besets the world's needy. Although this was primarily conceived as an intergovernmental operation, it has grown into one of the most significant voluntary testimonials of humanity in modern times. People of some thirty nations are volumtarily giving what they can to feed, shelter and clothe nearly half of the 230,000,000 children on the fringes of starvation—the half which can be reached in time.

The American Overseas Aid-United Nations Appeal for Children campaign, under way nationally during February, is America's bright share in this encouraging over-all picture of world coöperation. People in the United States who give to AOA-UNAC can, at one and the same time, prove a true world citizenship by helping the world's children and by supporting the vital activities of the major private American agencies for foreign relief and service.

True citizenship calls for a willing acceptance of responsibility and in the distressed world of today we willingly accept ours. We are determined to do what we can to keep children from starving, to keep people healthy, to give them training in industrial or agricultural vocations which will help them to help themselves.

Gifts of cash which will express responsible world citizenship may be made through local AOA-UNAC committees or sent directly to American Overseas Aid-United Nations Appeal for Children, 39 Broadway, New York 6, N. Y.

MEMBERSHIP

The following applicants for membership were duly elected to membership at the meeting of the Executive Board, February 23, 1948, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

Active Members

Kenneth E. Blundon, 2501 Forest Glen Road, Silver Spring, Md.
Thomas McPherson Brown, 2650 Wisconsin Avenue, N.W.
Rene Cailliet, 2633 16th Street, N.W.
Francis P. W. Hannan, 1511 17th Street, N.W.
Alvin Irving Kay, 3609 Van Ness Street, N.W.
Jay McLean, 300 Indiana Avenue, N.W.
Saul Zukerman, 417 Decatur Street, N.W.

Associate Member

Eugene P. Cronkite, 205 E. Hamilton Avenue, Silver Spring, Md.

The following applicants for membership will be voted on at the meeting of the Executive Board, April 26, 1948:

For Active Membership

Halla Brown, Johns Hopkins University—1939
Edna Gerrish Dyar, University of Maryland—1930
Thomas A. Gonder, Duke University—1937
Charles G. Hoyt, George Washington University—1941
Vincent Michael Iovine, Columbia University—1935
Christopher Joseph Murphy, Jr., George Washington University—1944
Lucy D. Ozarin, New York Medical College—1937
Charles Fredrick Stiegler, New York University—1940

For Associate Membership

Robert Chester Burnham, New York Medical College—1941
John Oliver Nestor, Georgetown University—1940

News and Personals

In response to a request from President Truman, a **National Health Assembly** has been called by Federal Security Administrator Ewing, to be held in Washington, D. C., May 1–4. The purpose of the conference will be to develop feasible national health goals for the next ten years. Dr. George F. Lull, Secretary and General Manager of the American Medical Association, is one of the 24 representatives of private organizations and agencies in the country who have been invited to serve on the executive committee of the Assembly.

Members of the Medical Society are cordially invited to attend a **Seminar in Neuropsychiatry,** April 5–16, in Richmond, Va., which will be given under the auspices of the United States Public Health Service and the Commonwealth of Virginia. This Seminar, which has the endorsement of the Medical Society of Virginia, will be given without fee for all physicians in the USPHS district, which includes the District of Columbia.

The American Association for the Study of Goiter will convene at the King Edward Hotel, Toronto, Canada, May 6–8, 1948.

The Twelfth Annual Postgraduate Institute of the Philadelphia County Medical Society will be held at the Bellevue-Stratford Hotel, April 20–23. As last year, the program will consist of a series of symposia on subjects of practical interest to the general practitioner and specialist. A registration fee of $5.00 will be charged. A copy of the preliminary program may be secured by writing to Dr. Gilson Colby Engel, Director, 301 South 21st Street, Philadelphia 3, Pa.

At the regular meeting of the **Silver Spring Academy of Medicine**, April 5, Colonel J. E. Ash, Curator of the American Registry of Pathology, will speak on "The Lymphadenopathies." His paper will be discussed by Dr. Ellery James, Director of Laboratories and Assistant Professor of Pathology, George Washington University.

CALENDAR OF MEETINGS

February 2	Subcommittee on Child Welfare
February 3	D. C. Dietetic Association
February 4	Board of Trustees, Medical Service
February 5	Section on Neurology and Psychiatry
February 7	Washington School of Psychiatry
February 9	Medical Bureau Committee
	Washington Orthopedic Club
February 10	Committee on Industrial Medicine
	Registered X-ray Technicians of Washington
February 11	Scientific Meeting of Society
	Woman's Auxiliary
February 12	Washington Metropolitan Health Council
February 14	Washington Psychoanalytical Society
February 16	Committee on Postgraduate Education
	Washington Orthopedic Club
February 17	Classification Committee
	D. C. Medical Technicians
February 18	Scientific Meeting of Society
	Subcommittee on Mental Health
February 19	Committee on Industrial Medicine
	District Dental Society
February 23	Executive Board
February 24	Nominating Committee
February 26	Committee on Arrangements, 19th Annual Scientific Assembly
	Subcommittee on Diagnostic Clinics
	Section on Radiology
	Washington Diabetes Association
February 27	Graduate Nurses' Association
February 28	Washington Psychoanalytical Society

Part II of the general oral and pathology examinations of the **American Board of Obstetrics and Gynecology** will be held at the Shoreham Hotel, Washington, May 16–22. Candidates for reëxaminations in Part II must make written application to the Secretary's office not later than April 1, 1948.

Applications are now being accepted, and will be until November 1, 1948, for the 1949 examinations. For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh, 6, Pa.

The Society of Registered X-ray Technicians will meet Tuesday evening, April 13, at 8 p.m., in the Medical Society's Library.

The Annual Meeting of the **D. C. Dietetic Association** will be held at the Shoreham Hotel, April 10, 1948.

The Nominating Committee presented the following slate of officers for 1948–49 to the Society at its business session, March 3:

For President-elect: Dr. Walter Freeman
For First Vice President: Dr. Charles P. Howze
For Second Vice President: Dr. Caroline Jackson
For Member of Executive Board for four-year term: Dr. Raymond T. Holden
For Member of Board of Censors for three-year term: Dr. Michael J. McInerney
For Delegate to American Medical Association for two-year term: Dr. Herbert P. Ramsey
For Alternate Delegate to AMA for two-year term: Dr. Hugh H. Hussey

Election of officers will take place at the Annual Business Meeting of the Society, May 5.

The list of approved hospitals for 1947 has been released by the **American College of Surgeons.** District hospitals which have been approved by the College for graduate training in surgery and/or a surgical specialty are Central Dispensary and Emergency, Freedmen's, Gallinger Municipal, Garfield Memorial, Georgetown University and Providence.

Approved for training interns by the Council on Medical Education and Hospitals of the American Medical Association are Central Dispensary and Emergency, Doctors, Freedmen's, Gallinger, Garfield, Georgetown University, George Washington University, Providence, Saint Elizabeths, Sibley Memorial and Washington Sanitarium.

Approved for residencies or fellowships by the Council on Medical Education and Hospitals of the AMA are Central Dispensary and Emergency, Children's, Columbia Hospital for Women, Doctors, Eastern Dispensary and Casualty, Episcopal Eye, Ear and Throat, Freedmen's, Gallinger, Garfield, Georgetown University, George Washington University, Providence, Saint Elizabeths and Sibley.

Nine hospitals have been accredited as schools of nursing by the State Board of Nurse Examiners. They are Central Dispensary and Emergency, Freedmen's, Gallinger, Garfield, Georgetown, Providence, Saint Elizabeths, Sibley and Washington Sanitarium.

The cancer clinics at Garfield and Georgetown Hospitals have also been approved by the College.

The American Medical Association was nominated to receive the 1947 award of the American Pharmaceutical Manufacturers' Association, which is given annually "in behalf of the pharmaceutical manufacturing industry in recognition of a fundamental contribution to public health in the field of medical sciences and from the standpoint of basic research progress in drug therapy." At the Scientific Award Dinner, held at the Waldorf-Astoria, New York, December 16, during the mid-year meeting of the A.P.M.A., the award was formally presented by Dr. Perrin H. Long, Professor of Preventive Medicine, Johns Hopkins University; it was accepted by Dr. R. L. Sensenich, President-elect of the AMA.

At this meeting, Dr. Morris Fishbein, Editor of the *Journal of the AMA*, and Mr. S. DeWitt Clough of Abbott Laboratories, Chairmen of the Board, made a joint announcement of the establishment of a new foundation for basic medical research, to be called the Pharmaceutical-Medical Research Foundation. It will be financially supported, in major part, by the pharmaceutical industry as a contribution to the national welfare.

The evening's address was furnished by Dr. Edward L. Bortz, President of the AMA. His subject was "The Philosophy of Medical Research."

Georgetown University School of Medicine has been awarded the Certificate of Achievement by the Navy's Bureau of Medicine and Surgery. In a congratulatory letter from Rear Admiral C. A. Swanson, Surgeon General of the Navy, the University was commended for its significant contribution to the Navy's program of "training medical students to meet the increasing need for members of the medical profession in this critical period."

Mr. Frank E. Smith, Director of Associated Medical Care Plans, announces that AMCP moved into new quarters, January 1, at 330 South Wells Street, Chicago 6, Illinois. The change was made necessary because the staff was expanding and additional space was not available in the AMA building.

At the meeting, December 13, the AMCP Commission officially adopted the name "Blue Shield" with appropriate symbol as the official insignia for AMCP and its member plans.

A delegation from the District Medical Society journeyed to Baltimore, February 6, to attend the **joint meeting of the District and Baltimore City Medical Societies.** Captain L. G. Bell, M.C., U.S.N., Chief of Surgery, National Naval Medical Center, read a paper on "Congenital Polyposis of the Colon: Pathogenesis and Treatment." His paper was discussed by Dr. Robert J. Coffey, Professor of Surgery, Georgetown University School of Medicine. The second part of the program was devoted to a Diagnosis of Liver Disease. Two papers were presented on this subject: "Clinical Application of Liver Biopsies," Dr. Irving B. Brick, Gallinger Municipal Hospital, and "Interpretation of the Hepatogram," Dr. O. B. Hunter, Jr., Georgetown University Hospital. The program concluded with a presentation by Dr. Louis K. Alpert, Associate in Medicine, George Washington University School of Medicine, on "The Uses of Nitrogen Mustard in the Treatment of Neoplastic Diseases."

A buffet supper and social hour followed the program.

At the meeting of the **Executive Board,** February 23, President Holden presented the names of members he had appointed to serve on the Special Committee on Medical Care in Public Institutions in the District of Columbia. They are as follows: Dr. Maurice A. Selinger, Chairman; Drs. James N. Greear, Jr., A. Claggett Gray, Carolyn Pincock, and J. Ross Veal. The Board gave its approval to the selection made.

Dr. Karl H. Wood was elected President of the **Interprofessional Conference,** January 27, at its annual meeting in the Burlington Hotel. Dean Charles W. Bliven, of George Washington University School of Pharmacy, was named Vice President, and Miss Edith M. Beattie, of the Graduate Nurses' Association, was reëlected Secretary.

The establishment of an **Experimental Biology and Medicine Institute,** in the National Institute of Health of the USPHS, has been announced by Oscar R. Ewing, Federal Security Administrator. The Institute will combine the functions of the Division of Physiology and the Pathology and Chemistry Laboratories and will permit greater coördination of scientific investigations. Dr. William Henry Sebrell, Jr., Chief of the Division of Physiology, has been named Director of the new Institute. He will also serve as Associate Director of the National Institute of Health.

Dr. Sebrell, a graduate of the University of Virginia Department of Medicine in 1925, and an authority in the field of nutrition, has been with the Public Health Service since his graduation. He is a Fellow of the American College of Physicians, and of the American Public Health Association, an Associate Fellow of the American Academy of Pediatrics, and a member of the Food and Nutrition Board of the National Research Council.

The Clinical Society of the Diabetes Asociation of the District of Columbia presented the following program in the Medical Society's auditorium, February 26: "Acidosis and Coma in Diabetes," Dr. William R. Jordan, Associate Professor of Medicine, Medical College of Virginia, Richmond; "Vascular Complications in Diabetes," Dr. Henry Dolger, Mt. Sinai Hospital, New York City; "The Eye Complications in Diabetes," Dr. James N. Greear, Jr., Washington.

The Washington Medical and Surgical Society held its regular meeting, January 26, at the Hotel 2400. Dr. Ray F. Guynn discussed trends in medicine, and Dr. E. Raymond Fenton gave a case report on pneumo-peritoneum.

Members of the **Jacobi Medical Society** heard an address by Dr. Robert B. Greenblatt, Professor of Endocrinology at the University of Georgia, January 19. His topic was "The Therapeutic Use of Androgens in Men and Women."

The Metropolitan Health Officers' Association held a luncheon meeting, February 10, at the Washington Golf and Country Club. Discussion was devoted to the current mass chest and X-ray survey in the Metropolitan Area.

The MHOA is made up of health officers representing the cities of District of Columbia, Alexandria, and Arlington, and the counties of Fairfax, Montgomery, Prince Georges and Prince Williams. Dr. Daniel L. Seckinger is President of the Association, and Dr. Ralph G. Beachley, Secretary-Treasurer.

Members of the Medical Society are reminded that the resources of the **Army Medical Library** are available to them. The Library is open each day during the week from 8:15 to 5 p.m. and on Sundays from 1 p.m. to 5 p.m. On Wednesdays the Library remains open until 9 p.m. It is closed on legal holidays.

Children's Hospital building fund has been oversubscribed, a total of $1,319,950.74 having been pledged during the past 20 months. The original goal was $1,300,000. Construction will probably begin in the spring.

Dr. Wm. Calhoun Stirling has been awarded the Certificate of Merit for outstanding fidelity and meritorious conduct as consultant in urology to the Surgeon General of the Navy. The certificate was presented to him on February 13 by Secretary of the Navy Sullivan in the presence of a distinguished group of Navy officers. Dr. Richard B. Cattell of the Lahey Clinic was also present and received the same award.

Dr. Stirling has been reappointed consultant to the Bureau of Medicine and Surgery by Rear Admiral C. A. Swanson, the Surgeon General.

Dr. Edward J. Stieglitz participated in the Thirteenth Series of Lectures to the Laity sponsored by the New York Academy of Medicine on "Perspectives in Medicine." His lecture, given on January 22, was entitled, "On Being Old Too Young" and was broadcast over WNYC. Dr. Russell L. Cecil was the presiding Chairman.

Dr. Stieglitz has spoken before many groups during the past several months: Annual Conference of Health Officers of the New York State Department of Health, Saratoga Springs, July 30, "Health in an Aging Population"; Chicago League of Nursing Education, September 26, "Giving Meaning to Age"; Annual Conference of the American Dietetic Association, Philadelphia, October 15, "Aging as a Problem of Nutrition"; Postgraduate Assembly of the Monroe County Medical Society, Rochester, N. Y., November 13, "The Meaning of Geriatrics."

He also discussed social medicine from the clinician's viewpoint at the 24th Annual Conference of the Milbank Memorial Fund, New York, November 19 and 20, and on December 11 he addressed the New York State Joint Legislative Committee on Problems of the Aging, at New York City, regarding individual responsibility for health maintenance.

Major General Raymond W. Bliss, Major General Albert W. Kenner and Major General Shelley U. Marietta were elected Honorary members of the Medical Society of the District of Columbia at the Society's meeting, January 14.

Dr. Walter Stokes spoke on "Physical Aspects of Marriage" at Calvary Baptist Church, February 3. His talk was one of a series on "Preparing for Marriage and Home Life" sponsored by the Washington Federation of Churches. Dr. Stokes is Chairman of the Medical Advisory Board of the D. C. Planned Parenthood Association.

Dr. Walter A. Bloedorn, Dean of George Washington University School of Medicine, addressed Illinois alumni of the University at a meeting in Chicago, February 7. Dr. Bloedorn is President of the Association of American Medical Colleges.

Dr. Wallace M. Yater delivered a lecture to the student body of the Hahnemann Medical College, February 27, as guest of the Phi Delta Epsilon Fraternity. The lecture was given in the Klahr Auditorium.

Dr. Winfred Overholser spoke on "Mental Hygiene" at the opening session of the annual Area B Child Welfare Conference, which was sponsored by the American Legion and its Auxiliary at the Statler Hotel, February 13. Delegates were in attendance from seven Middle Eastern states, Puerto Rico, and the District of Columbia.

Dr. Henry C. Macatee discussed "Medical Needs of Washington" before the Progressive Citizens'

Association, Congress Heights, February 3. The meeting was held in the Congress Heights School.

Dr. Macatee accepted the assignment from Dr. Walter Stokes, Chairman of the Medical Society's Committee on Public Relations.

Dr. Charles F. Geschickter addressed the District of Columbia Society of Medical Technologists, February 17, in the Medical Society's Building. His subject was "The Use of Radioactive Isotopes in Malignancy."

Dr. Alma Jane Speer acted as moderator for a panel discussion on "Lady Be Healthy!" presented before the District Business and Professional Women's Club, February 9, in the U. S. Chamber of Commerce building. Participating in the discussion were Dr. Elizabeth Parker and Dr. Anna R. Coyne-Todd.

Dr. Lawrence E. Putnam discussed "New Penicillin Preparations" at the general staff conference of Emergency Hospital, January 27.

On February 2 he addressed the Washington Nurses' Association at Scotts Hotel. His talk was entitled, "Recent Advances in the Treatment of Heart Diseases."

Dr. Custis Lee Hall was recently elected an Honorary member of the Peruvian Society of Orthopedics and Traumatology.

Among the speakers at the 11th Annual Parent-Teachers Institute, January 28, sponsored by George Washington University and the District Congress of Parents and Teachers, were **Drs. George C. Ruhland, Joseph A. Murphy, Ella Oppenheimer and L. E. Wexberg,** from the District Health Department.

Dr. Darrell C. Crain was recently appointed Chairman of the Committee on Affiliated Units of the American Rheumatism Association.

Dr. E. P. Luongo, an Associate member of the District Medical Society, has been appointed Medical Director of the General Petroleum Corporation in Los Angeles. While in Washington Dr. Luongo was Assistant Medical Director of the U. S. Civil Service Commission, specializing in rehabilitation. In 1946 he moved to California to become Assistant Medical Director of the Pacific Indemnity Company of Los Angeles. He resides at 1757 North Stanley Avenue, Los Angeles.

Dr. Herman Kabat has advised the Medical Society's Secretary that he is planning to move to Oakland, Calif. in the near future in order to direct the Kabat-Kaiser Institute there. The Washington branch of the Institute, which Dr. Kabat has directed since its founding in 1946, will continue under the direction of Dr. Rene Cailliet.

Dr. John M. Byers has resigned his position as health officer for Prince Georges County to accept a post with the Maryland State Health Department. He has been succeeded in office by **Dr. Thomas S. Englar,** whose office will be in the Courthouse at Upper Marlboro instead of in the County Service Building at Hyattsville, where Dr. Byers made his headquarters. Dr. Englar was formerly health officer for Charlottesville and Albemarle County, Va. He assumed his new duties, January 15.

Dr. Katherine K. Rice, who is employed in the District Health Department's Bureau of Mental Hygiene, discussed "Treatment of Alcoholics and Alcoholic Clinic in the Community" before the Montgomery County Bureau of Nursing Education, January 19. The meeting was held at Suburban Hospital.

Dr. Maurice H. Friedman attended the Third Annual Meeting of the National Conference on Rural Health in Chicago, February 6 and 7. He addressed the Conference on "Rural Youth and World War II."

Dr. William K. Billingsley, Jr., has been appointed an associate member of the Board of Police and Fire Surgeons.

Dr. Walter A. Bloedorn attended the 44th Annual Congress on Medical Education and Licensure which was held in Chicago, February 8–10. Dr. Bloedorn led discussion of a paper on "Motion Pictures in Medical Education," presented by Mr. Ralph Creer, Secretary of the Committee on Medical Motion Pictures of the AMA.

Van Campen Adams has been appointed Administrator of **Alexandria Hospital,** succeeding **Robert G. Whitton,** who resigned recently. Mr. Adams, who took over his new post, January 5, has been Administrator of the Jewish Hospital in Cincinnati, Ohio, for the past seven years. Four years previously he was Superintendent of the City Hospital of Springfield, Ohio, and from 1924 to 1937 was connected with the Mayo Clinic of Rochester, Minn.

Dr. James J. Feffer, Vice President of the District Tuberculosis Association, was guest of honor and speaker at the Fourth Annual Donor Banquet of the Intermediate Group of the Jewish Consumptives' Relief Society. The banquet was held at the Mayflower Hotel, January 20.

Dr. Winfred Overholser addressed the Twentieth Century Club on "Mental Health" at its meeting at the Y.W.C.A., January 8.

Dr. Wendell A. Parker, resident physician at St. Elizabeths Hospital, is now a diplomate of the American Board of Surgery.

Captain Chester Wells, U. S. N. (retired), President of the Board of Directors of **Columbia Hospital** for the past 12 years, and a member of the Board for more than 20, has resigned because of his health.

Dr. Irving Winik addressed a luncheon meeting of the Washington Ladies' Auxiliary of the Jewish Consumptives' Relief Society of Denver, at the Jewish Community Center, January 7.

Dr. Norvell Belt has recently been appointed Chief of the Surgical Staff at Arlington Hospital.

Dr. George H. Yeager has succeeded **Dr. W. Houston Toulson** as Secretary of the Medical and Chirurgical Faculty of the State of Maryland.

Dr. Paul R. Wilner was elected a Fellow of the American College of Physicians at the November meeting.

Dr. John R. Cain has moved to Weston, West Virginia, where he is head of the Tuberculosis Center at the Weston State Hospital.

Dr. Oscar B. Hunter, Jr. spoke on the importance of the Rh blood factor before the District Association of Medical Record Librarians, at Doctors Hospital, January 28.

Dr. Harold J. Jeghers is currently assisting in the program of Professional Staff Proceedings at Walter Reed General Hospital.

Dr. Thelma Dunn, of the National Cancer Institute, spoke on advances in cancer research before the Women's Medical Society, February 3, in the solarium of Doctors Hospital.

The Editorial Board of the MEDICAL ANNALS announces the death, December 25, 1947, of **John R. Beuchler,** who founded Beuchler's Surgical Instrument Company in 1920. Since his retirement in 1940, his son, Henry G. Beuchler, has carried on the business.

Dr. Charles C. Haskell, founder of the Charles C. Haskell Company, manufacturers of prescription pharmaceuticals, died November 12, 1947, at his home in Richmond, Virginia, after a brief illness. His daughter, Miss Margaret Graham Haskell, is planning to continue the business.

Dr. Haskell was a graduate of Harvard Medical School. For several years he taught in the Department of Physiology and Pharmacology of the Medical College of Virginia, and in 1916 he was made head of the department. He resigned in 1929 to become Medical Director of Ciba Pharmaceutical Company, Summit, N. J., which position he held until 1937, when he founded his own company in Richmond.

Both Dr. Haskell and Mr. Beuchler were well known to many Washington physicians.

Eli Lilly and Company announces the death of **Josiah K. Lilly, Sr.,** Chairman of the Board of Directors and former President of the Company, on February 8, 1948. He was one of the four original employees of the firm, founded in 1876 by his father, Eli Lilly. He retired from active service with the Company on January 1, 1945, having served as President for 34 years. Under his management the Company became one of the outstanding organizations in the pharmaceutical field, with international distribution.

BOOK REVIEWS

A Primer of Cardiology. George E. Burch, M.D., F.A.C.S., Associate Professor of Medicine, Tulane University School of Medicine; Senior Visiting Physician, Charity Hospital; Consultant in Cardiovascular Diseases, Ochsner Clinic; Visiting Physician, Touro Infirmary, New Orleans, and Paul Reaser, M.D., Instructor in Medicine, Tulane University School of Medicine; Assistant Visiting Physician, Charity Hospital, New Orleans. Price, $4.50. Pp. 272, with 203 illustrations. Philadelphia: Lea & Febiger, 1947.

This primer provides a very practical introduction to the study of cardiology. The material is presented almost entirely in a manner which carries the reader quickly to an understanding of the physiologic background for disease. This is made possible in large part by the 203 illustrations which are models of simplicity and clarity. A nice gesture is the trick of repeating some of the illustrations several times in order to spare the reader the odious necessity of turning pages to refer to previous figures.

The first chapter covers the general anatomic considerations. Chapter 2 is concerned with the scope of diagnosis, the pathognomonic signs of heart disease, heart failure, and the physiology of edema. Chapter 3 discusses in detail the approach to a clinical cardiac evaulation by means of history and physical examination. The section on heart sounds and murmurs has been done with extraordinary skill. The fourth chapter takes up in turn the various etiologic types of heart disease, and the final chapter is devoted to the bedside diagnosis of cardiac irregularities. There is a brief but valuable appendix containing the elements of the diagnosis in heart disease, the relations of cardiac measurements to body size, and diets employed in heart disease. The index is complete, and a bibliography has appropriately been omitted. The printing and assembly of the book are well done and greatly facilitate reading.

In summary, this is a book that can be given unqualified recommendation to any physician or medical student interested in cardiology. It should be of special interest to those engaged in teaching. Indeed it is a lesson in the art of teaching.

H. H. H.

Diseases of Metabolism—Detailed Methods of Diagnosis and Treatment—A Text for the Practitioner, 2nd ed., edited by Garfield G. Duncan, M.D., Director of Medical Division, Pennsylvania Hospital; Clinical Professor of Medicine, Jefferson Medical College, Philadelphia. Price, $12.00. Pp. 1045, with 167 figures. Philadelphia: Saunders, 1947.

This volume should be possessed by every general practitioner or internist who desires to treat the various diseases of metabolism scientifically. Following several chapters on the fundamental knowledge of the various aspects of metabolism the reader is given authoritative information on the clinical and practical features of the vitamin deficiencies, under-nutrition, obesity, gout, diabetes, disorders of the thyroid gland, and other subjects. Well known experts have collaborated to make the book a notable one. The bibliography is extensive. Sufficient dietotherapy is included to give the reader a working knowledge of the subject. However, practical culinary instructions must be sought elsewhere. The reader must realize that the book is valueless if he wishes only something to scan through; he must read slowly and carefully by the quiet of his fireside to get the most out of the text. This second edition brings him up to date.

W. M. Y.

Handbook of Psychiatry. Winfred Overholser, A.B., M.D., Sc.D., Superintendent, Saint Elizabeths Hospital; Professor of Psychiatry, George Washington University, Washington, D. C., and Winifred V. Richmond, B.S., A.M., Ph.D., Late Chief, Department of Psychology, Saint Elizabeths Hospital; Late Consultant in Psychology, New Mexico State Department of Welfare. Price, $4.00. Pp 252. Philadelphia: Lippincott, 1947.

The "Handbook of Psychiatry," a September, 1947 addition to the lengthening list of publications addressed by medical specialists to a lay, or nonspecialist, audience, is both one of the most satisfying and, at the same time, one of the most irritating books to appear in recent months.

Writing ". . . . in the faith that the layman wants to know more about psychiatry, and that, rightly informed, he will lose much of his dread of mental abnormalities and be willing, even eager, to join with psychiatry and mental hygiene in helping to advance the campaign for better human beings in a better world," the eminent authors, Dr. Overholser and the late Dr. Richmond (their authority in the fields of psychiatry and psychology needs no explanation to Medical Annals' acquaintances) have attempted "to present, in a simple and unsensational manner, the elements of the varied types of mental disease, their causes, symptoms and prospects . . . [and] to clarify for the nontechnical reader the substance of mental disease and the proper attitudes toward it." They succeeded remarkably well in the attempt; it would probably be difficult to find a more admirable "first reader" in psychiatry, for the Handbook rewards its examiner with that rare satisfaction which the sight of an accomplished goal calls into being.

However, will "the college student, the nurse, the average man or woman who has mentally ill relatives or friends, and perhaps even the practicing physician who has shied at the more technical volumes on the subject" read the book primarily for the pleasure of seeing the authors succeed in their aim? It seems unlikely. Generally speaking, the average man or woman whose professional life is engaged in some discipline other than psychiatry reads in that unfamiliar field for the purpose of finding specific answers to specific questions—and usually the questions deal with what action to institute in a given instance. Therefore, as a result of the care taken to sketch therapy "in general terms only" because of the writers' desire to refrain from being parties to "self-treatment," the descriptions of mental disease entities are deprived of much of their potential usefulness to the layman, leaving him, at the end, irritated by his unanswered queries. He is grateful for the honesty shown in pointing out the difficulties which impede provision of adequate care for many paranoiac and psychoneurotic cases; nevertheless, in view of those difficulties, he would have been equally grateful for suggestions on how to establish some workable *modus vivendi* with these "unknown thousands of neurotics in the community," to at least some of whom he may owe a friend's or a relative's assistance. It is to be hoped that some competent psychiatrist will soon give to the nonprofessional public a manual of procedures in extra-hospital care of the mentally ill.

On the whole, however, the book will be a desirable addition to the library of anyone subscribing to the dictum that "the proper study of mankind is man." Well organized, clearly expressed in smoothly polished phrases, progressing from part to part through transitions designed to eliminate jars to the audience, the Handbook possesses usefulness as a reference tool—a usefulness that is much enhanced by an index and by the carefully chosen lists for further reading that appear at the end of every chapter.

The qualification, "carefully chosen," is used with full intent: in so far as this reviewer is aware, very few, if any, of the titles suggested for further reading contradict to any appreciable degree the philosophy of materialistic humanism which apparently underlies the authors' approach to the problems of mental illness. Many readers will not agree fully with the bald statement that "in its knowledge of fundamental human needs and its insistence upon the necessity for their fulfillment, psychiatry has the key to the development of normal personality." Moreover, some critical discussion of the growing development of the client-centered and nondirective therapy that is founded upon the individual's own capacities for self-realization, along with a thorough examination of the increasingly widely accepted concept that a strong motivating force as a basis and code for living is one of the individual's greatest defenses against the development of psychiatric disorders—so great a defense, indeed, that it often transcends the destructive effects of bad environment, inadequate constitution, and poor genealogy—would be a welcome addition to the picture of general trends noted in present-day thought along psychologic and psychiatric lines.

It must be observed, however, that the discriminating reader will be happy to see that the authors have consistently and insistently pointed out some of the desirable areas of coöperation between the layman and the psychiatrist. Although the last chapter, "Psychiatry and the Layman," may possibly be considered the most concretely informative one in regard to positive action on the part of the layman, there is in the whole book scarcely a page left unmarked by stimulating statements. In fact, one reading the volume from beginning to end at a single sitting is compelled to acknowledge that a powerful—perhaps the most powerful—integrative force of the whole work is the constantly recurring impact in his consciousness of the repeated suggestions for action. A few quotations will serve to clarify the point: "When hospitals are not what they should be, when they fail to use the psychiatric and medical knowledge that is available today in the treatment of their patients, it can be no one's fault but that of the citizenry. We live in a democratic country, where each one's duty is to inform himself upon all the things that concern the public welfare (p. 32)." Again, if "early recognition and treatment of a mental breakdown is the only guarantee that the patient will recover promptly, if recovery is possible for him (p. 39)," then the implications for the layman are obvious. They are no less pointed in this statement: ". . . . So far as we know now, the best guarantee against any kind of adult maladjustment, barring accident or organic disease, is a childhood spent with normal and well-adjusted people, preferably one's own parents (p. 149)."

With the sound of this call to action ringing in their ears, the Handbook's lay readers will await with interest the future unfolding of a dynamic strategy from psychiatrist leaders in the campaign for "better human beings in a better world."

ELIZABETH J. BARHAM

MEETINGS

Wednesday, April 14

The program will be presented by the *Washington Academy of Surgery*. Speakers and subjects to be announced.

Wednesday, April 28

Speakers and subjects to be announced.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have been received for review:

Minor Surgery, 6th ed. Frederick Christopher, B.S., M.D., F.A.C.S., Associate Professor of Surgery, Northwestern University Medical School; Chief Surgeon, Evanston (Illinois) Hospital. Price, $12.00. Pp. 1058, with 937 illustrations on 595 figures. Philadelphia: Saunders, 1948.

Ulcer. The Primary Cause of Gastric and Duodenal Ulcer—Diagnosis, Medical and Surgical Treatment, Prevention. Donald Cook, B.A., M.D. Pp. 187, with 27 illustrations. Chicago: Medical Center Foundation and Fund, 1946.

A Manual of Clinical Therapeutics—A Guide for Students and Practitioners, 2nd ed. Windsor C. Cutting, M.D., Professor of Therapeutics, Stanford University School of Medicine, San Francisco, California. Price, $5.00. Pp. 712, with 30 illustrations. Philadelphia: Saunders, 1948.

Practical Child Guidance and Mental Hygiene. Samuel Kahn, M.D., Ph.D., Adjunct Professor of Psychology and Psychiatry at Long Island University; formerly Professor of Neurology and Psychiatry at Georgetown and George Washington Universities; Chief Psychiatrist, New Jersey and Delaware Induction Boards for the United States Army; author of Sing Sing Criminals, Mentality and Homosexuality, How to Study, How to Learn and Advance, Psychological and Neurological Definitions, Suggestion and Hypnosis Made Practical, etc.; Grace Kirsten, A.B., formerly with the New York City Department of Education and Lecturer on Child Guidance; and May Elish March, A.B., M.A., formerly a teacher in the New York City High Schools. Price, $4.00. Pp. 285. Boston: Meador 1947.

140 Million Patients. Carl Malmberg. Price, $2.75. Pp. 242. New York: Reynal & Hitchcock, 1947.

Sexual Behavior in the Human Male. Alfred C. Kinsey, Professor of Zoology, Indiana University; Wardell B. Pomeroy, Research Associate, Indiana University; and Clyde E. Martin, Research Associate, Indiana University. Price, $6.50. Pp. 804, with 173 charts and 159 tables. Philadelphia: Saunders, 1948.

A Manual of Pharmacology and its Applications to Therapeutics and Toxicology, 7th ed. Torald Sollmann, M.D., Professor Emeritus of Pharmacology and Materia Medica, School of Medicine, Western Reserve University, Cleveland. Price, $11.50. Pp. 1132. Philadelphia: Saunders, 1948.

False Positives—Love and Barksdale

(*Continued from page 148*)

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Anesthesia—Tuohy

(*Continued from page 152*)

portable and the metapules which contain the various types of drugs are steri-sealed and are immediately available for the hypospray. Cleansing of the skin with a suitable antiseptic is the only preliminary step required prior to the use of the hypospray. Many other uses for this instrument may be found.

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Pregnancy and Polyostotic Fibrous Dysplasias—Nelson

(*Continued from page 159*)

that she had undergone an exploration of the parathyroid glands, a useless procedure not infrequently done in the past under the mistaken diagnosis of osteitis fibrosis cystica.

Although the baby showed no evidence of the disease, the possibility of later development of the condition must be considered.

SUMMARY

A case of polyostotic fibrous dysplasia associated with pregnancy terminated by delivery

of a normal child is reported. Although no similar case was found in the literature, it seems unlikely that the possibility of pregnancy in this disease is as remote as the lack of reported cases would seem to indicate.

The kindness and assistance of Dr. A. Y. P. Garnett and Dr. A. O. Hampton are much appreciated by the author.

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Report of Junior Delegate to AMA

(Continued from page 173)

of Trustees are to be filled by election at the June 1948 meeting in Chicago. This subject has been dealt with at length in an editorial in the previous issue of the Medical Annals (q.v.).

Respectfully submitted,
Herbert P. Ramsey, M.D.
Delegate

Maryland's Medical Care Patient—Ellicott

(Continued from page 175)

The plan is open to criticism because of its limitation to a very low-income segment of the population. Can a family of four depending on an income of $1,800 pay for physicians' services and, at present prices, still have enough to buy adequate food? The reason, however, for the low-income scale is not a belief that it is reasonable but that the state appropriation of $500,000 per year for the counties is barely enough to pay the bills of this small group.

Washington Physicians of Yesterday—Smith

(Continued from page 176)

general medicine, with a slant toward obstetrics and gynecology. He was Consulting Physician to Emergency Hospital and Consulting Obstetrician to Freedmen's Hospital, and President of the Washington Obstetrical and Gynecological Society, 1897–99. He made a number of creditable contributions to medical literature, principally relating to his special line of practice.

It was through his activities in the Medical Society of the District of Columbia that Dr. Smith deserves recognition as a useful and distinguished member of the local medical profession. He became a member of the Society on July 4, 1864, as did also, on the same date, Drs. J. Ford Thompson and A. F. A. King. These three, with Dr. Louis Mackall II, were the principal members who thereafter initiated the renascence and scientific vivification of the Society which was achieved by the "Old Guard." Dr. Smith was Corresponding Secretary of the Society 1878–80, 1883-87, and 1889–1913; also a member and most of the time Chairman of the Committee on Essays 1884–91 and 1893–1913. The interruptions in this long period of service were occasioned by his election as Vice President for 1881 and President 1888. In the conjoined capacity of Corresponding Secretary and Chairman of the Committee on Essays, lasting almost continuously for nearly 35 years and up to the time of his death, Dr. Smith was very efficient and successful in arranging the scientific programs for the meetings of the Society, and he possessed the faculty of inspiring enthusiasm and attendance.

In manner and appearance Dr. Smith was kindly and benignant, almost patriarchal; he was a man of broad sympathy and helpfulness and of faultless character. He was an earnest and sincere Christian gentleman, a devoted and beloved member of McKendree Methodist Episcopal Church. He died, after a short illness, on July 23, 1913. At a memorial meeting of the Society held in his honor October 22, 1913, eloquent testimony was given to the high esteem and deep personal affection in which he was held by his colleagues.

John B. Nichols, M.D.

MEDICAL ANNALS

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MEDICAL PREPAREDNESS IN ATOMIC DEFENSE*

REAR ADMIRAL CLARENCE J. BROWN

Assistant Chief of Bureau for Research and Medical Military Specialties, United States Navy

IN THE early years of my naval service, on the occasions when I was called upon to speak on any of the aspects of military medicine, I approached the task with considerable misgiving, because I was not completely aware of its importance, and later, for the reason that while I appreciated its significance, I was not sure that my listeners did.

However, the situation now is quite different. No physician who has had experience during the recent War, in any combat theater or in any supporting area, can possibly fail to appreciate to the fullest the importance of military medicine. It includes not only the prevention of disease, but also the problems of food, clothing and survival in various latitudes in those of medical as well as strictly military logistics, the treatment of wounds and conditions caused by missiles and explosives of all descriptions, and the handling and transportation of vast numbers of casualties by sea and by air.

The transfer of thousands of civilian physicians for service in the armed forces required indoctrination in many aspects of military medicine previously unfamiliar to them. They were required to become familiar with tables of organization, the prevention and treatment of tropical diseases, the efficient care of the wounded in battle, camp sanitation, water supply, sewage disposal, mosquito control, and a knowledge of military science and planning.

How well they appreciated the problem, how magnificently they performed this task, is known to everyone. The record is there for all to see, a triumph of modern medicine, as it is now taught, and a triumph of the men who were able to produce the results.

Most if not all of these problems do not normally occupy the thoughts of civilian physicians, nor are they normally the subject of any remarkable consideration in our medical schools. While most of us have no personal enthusiasm for war, yet how enriched in experience and knowledge must those doctors be who answered the call to the colors and who took any part in the momentous events.

The application of accepted modern methods of treatment to large numbers of men under wartime conditions always affords unique opportunity for an appraisal of the value of those methods, and frequently results in their modification and in ultimate benefit to the public. War affords opportunity also to estimate the value of many measures in public health, sanitation and hygiene, applicable to military and civilian populations alike. Invaluable lessons were learned concerning malaria, filariasis, dysentery, typhus fever and other communicable diseases. Under the impetus of war requirements vast strides were made in the treatment of the wounded, in the treatment of shock, and of many surgical conditions. Information was gained in medical logistics, which will be invaluable on the occasion of future disaster or catastrophe.

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* Read before the Society, March 3, 1948.

Although there were exceptions, it may be said that the great majority of physicians who served in the recent War were employed in assignments in which they were most useful. However, the fortunes of war are such that in spite of attempts to rotate officers to and from active zones, some never get there. They may be essential in some activity not directly concerned with combat, or they may be attached to a ship or unit which is important in general strategy but must remain far from the fighting. Such officers sometimes feel that they are in the war but not a part of it.

Because of the exigencies of amphibious and island-hopping warfare developed during the course of the two Wars, strategic requirements and logistic planning were frequently altered in accordance with fortuitous successes or unexpected setbacks. Medical units frequently found themselves by-passed, left far behind the zone of activity, or in situations in which they felt they were not advantageously employed. An attacking force might be carefully assembled, including medical units of sufficient magnitude to handle and care for a maximum number of casualties; in making its strike, if it experiences but few casualties, large numbers of medical officers are left ineffective and not actively employed in professional work. Another force, having made adequate plans for its expected number of casualties, might meet with unusual and unexpected opposition, so great that the casualties cannot adequately be evacuated, nor can the proper professional care be rendered by the medical officers available.

In either situation the medical officer is unhappy, and feels ineffective. Only in static warfare can the needs be fully anticipated. In modern wars of movement the problems are far more complex. The more rapid its progress, the more difficult it is to sustain the proper support.

In these experiences, whether they are satisfactory or unsatisfactory, the intelligent medical officer finds much to criticize; he learns how to do things and how not to do them; he learns of others' shortcomings as well as his own, and he capitalizes on what he has learned. He also learns a great deal about himself. Did his morning setting-up exercises and his regular game of golf pay off in his ability to take it; was he able to depart from his personal fixed routine of existence and accept with equanimity the dislocations of military life; was he able to carry on his usual standard of professional work when separated from the conveniences and protective influences of his own hospital; if a small town doctor enjoying great local prestige, did he stack up well with his big-city colleagues; was he so highly specialized that he was useless in general medicine; did he retain his ability to get along with others; and was he an asset to his organization?

The vast majority possessed all the necessary qualities; only a few did not. The vast majority responded in all circumstances. Many discovered completely latent abilities as administrators, unsuspected abilities in leadership or in organization, or rediscovered ability in other branches of medicine and surgery or in preventive medicine, possibly capitalizing on an interest in certain subjects long forgotten, or ability as teachers. I mention only as an example of this adaptability the instruction in gas defense of our naval forces in Europe, then preparing for the invasion of Normandy. The indoctrination in this vital subject, at that time of supreme importance, was voluntarily assumed and most effectively rendered by an ophthalmologist and two pediatricians, all prominent and successful doctors in Eastern communities.

Some of the best epidemiologists in the Pacific theater were pediatricians. Numbers of research men proved to be excellent administrators. A nationally known pathologist performed yeoman duties in quarantime.

As a result of the global character of this War, many physicians found themselves in the astonishing position of possessing greater familiarity with filariasis than with diphtheria, of schistosomiasis than with typhoid fever, of typhus than with smallpox, of tsutsugamushi disease than with tularemia, of encephalitis than with botulism.

There are now some 60,000 doctors who have returned to civil life after a varied experience in the military service, there to resume their education, their hospital and university affiliations, or their private practices. The necessity for many of them, not previously well established, to start over again, some in new localities, is often a struggle, another disagreeable experience chargeable to war.

Regardless of their experience, all have played a part in the great victories. All have acquired knowledge and experience in military medicine. And in common with the public as a whole, the vast majority probably would like to forget all about the last War, if they could, and avoid contemplation of another one. This, obviously, none of us can do.

Regardless of one's personal opinion as to the likelihood of war with another nation, one cannot deny, after reading the current books and periodicals, after listening to the pronouncements of our commentators, and public men, that we are making a very serious attempt, and rightly, to be prepared for any eventuality. That is what the people of the United States expect, and the necessity is recognized by the peoples' Congress.

Now, then, for what must we be prepared?

We must be prepared for all the usual types of warfare, plus the types of warfare developed in the latter part of the last War, and plus other types which are recognized but not as yet employed. If the next war is directed toward the survival of a civilization and is to be total warfare with the necessary 100 per cent manpower utilization, then it may be expected that all methods of warfare will be employed, and certainly the more desperate the situation the more likely this is to occur.

Although physicians may have no more than a lay interest in airplanes, rockets, guided missiles, or other new types of vehicles, we must maintain a lively and professional interest in the type of cargoes they bring to us.

Many physicians have had personal experience with the heretofore routine types of warfare such as small arms, mortar, and artillery fire or with the various aspects of naval warfare; many have been exposed to bombing from aircraft; relatively few have experienced V-1 attacks, and a mere handful have had uncomfortable experience with V-2 rockets. Except to the physician who is on the spot, none of these methods of warfare present any problems of magnitude to the profession as a whole. For the most part they may be, and are, handled locally by organized groups who have anticipated or planned the action. The direction from which danger is to come is usually known, and preparations for it have been made.

Most of the difficulties which arise early in ordinary war to plague the medical department are due to inexperience, not only of individual medical officers, and of their organizations, but of other services such as that of supply and transportation. After six months or longer it is surprising to see the efficiency and speed with which an army functions, the efficiency with which the Service of Supply operates. I well remember in Southampton the clock-like precision with which combat units, massive construction equipment, railway trains, and even locomotives were dispatched to France. Those who saw service in the Pacific have observed the split-second timing with which logistic and medical support was "laid-on."

However, only after several years of planning and preparation was it possible to produce and deliver personnel and equipment to launch the attack; only after months of actual engagement was it possible to evolve and perfect the system which sustained it.

How different will be the next war! If we are to believe the scientists, and we must believe them, we must accept the statements that much larger atomic bombs are possible, 100 times more powerful, that one bomb per city is all that will be required, that atomic bombs may be produced by other countries by 1952, that atomic bombs may be smuggled into any city, that radioactive materials as by-products of nuclear fission may be so distributed that everything may be killed within 500 miles, that the detonation of forty bombs in forty of our centers of population could easily cause the death of 4,000,000 people. If, indeed, we are to believe what we read of the potentialities of biological warfare, and the possibilities of new gases, then indeed the next war will be different. It must be remembered that the same scientists who admitted or conceived years ago that an atomic bomb was possible and then proceeded to produce it have not been able to even conceive of any adequate defense, nor do they at present extend any hope in its future probability.

It is interesting in this connection to note the comment made by Bernard Brodie in refutation of the often repeated statement that "there has never yet been a weapon against which man has been unable to devise a counterweapon or a defense." He claimed this to be historically inaccurate. That while the "naval shell gun of 1837 was eventually met with iron armor; the submarine countered with the hydroplane and supersonic detector and depth charges; the bombing airplanes accounted for the development of the specialized fighter aircraft and the highly perfected anti-aircraft gun, yet there has been no progress in defense against the V-2 rocket, and, in fact, there is as yet no adequate answer found for the bullet, after five centuries of the use of hand-arms with fire-propelled missiles."

I shall not describe in any detail the devastating effects of atomic bombing on cities. All of you have read of the results of the baby bombs in Japan. Nor is it my province to discuss the harmful effects of the bomb upon human beings.

What I do wish to point out is the enormous and awesome responsibility these new weapons, one of demonstrated destructiveness and others possessing potentialities not yet proved, place upon the medical profession of the United States.

It is frequently asserted that the greatest deterrent to the use of the various new weapons, including atomic bombs by another nation, is our known ability to promptly retaliate.

The general public may possibly derive some comfort from this oft-repeated assumption—not so the medical profession. Its work begins before any retaliation. No corollary should be drawn between the possibilities of retaliation which existed in the last War with reference to gas, with those which might exist in the future with reference to atomic warfare.

Long before the retaliatory bombs are received by the enemy we shall be confronted in our great cities by the world's greatest catastrophe, such utter devastation, such unexampled human misery as transcends the imagination. Gone will be our industrial cities, gone will be the majority of our skilled workmen so necessary in our ability to continue the struggle, gone will be our hospitals and many of our doctors and nurses. In addition to the presence of vast numbers of wounded within the cities, in addition to the fires and floods, there will emerge vast numbers of walking people consisting mostly of women, children and the aged. Thousands of them walk—but a great number, even though they walk, will not live.

During the immediately succeeding hours and in the dark days which follow, who will bear the burden of the professional care of the survivors, set up the sanitary controls, provide the mass inoculations, insure the safety of the food and water supplies, and direct the diagnosis and treatment of those who are suffering insidious radiation illness? Who is to maintain the alertness required to detect and recognize the introduction into the picture of unusual or unexpected diseases either among humans or among animals used for food, or the detection of evidence of noxious gases, and institute appropriate countermeasures?

The responsibility will rest squarely upon the shoulders of the civilian medical profession, whether or not they are in uniform, just as the responsibility rests on them in every war.

The members of the regular military medical departments, in addition to their regular duties, can do little more than plan, coördinate, and aid in organization and administration. During the last War there was sufficient time to provide civilian doctors with considerable training in field medicine, in administration, in the handling of casualties of war, in the mobilization of medical units—time to organize instructional systems. During the several years of preparation, while other nations were fighting on the sea, in the air, and in many lands, we had the opportunity to learn much from the experiences of our future allies and to become gradually accustomed to the practices of air forces and of highly mobile battle units, and to the technics employed.

We were able to learn, and to capitalize upon it enormously from British experience in jungle warfare in the far East, in desert warfare in Africa, and from the struggle for control of the sea. This remark pertains to the combat units as well as to the medical department. Many things we did not have to learn the hard way, as did our allies at the cost of many lives. We learned much as to the technics of modern warfare, and because of these lessons we learned we were more readily able to anticipate our future difficulties and to take steps to avoid certain pitfalls and errors that otherwise would have occurred. We also learned a great deal indirectly about our enemies. Developing shortages of certain essential drugs could be countered by the initiation of research for suitable substitutes. Much was learned about the treatment and handling of the casualties incident to a highly mobile type of combat. Many of the methods and practices established as a result of World War I were found obsolete and had to be discarded.

From the experience of the people of London we learned much about the organization of the civilian defense of a great city against an air attack of such proportions as to be almost mortal, where, but for the bravery and intrepidity of a few gallant airmen, the British would indeed have been fighting, as Mr. Churchill said, "on the beaches, on the streets, and in the fields." From them, and at no cost in American lives, we learned how to build shelters, to utilize the underground, to protect public utilities, to combat incendiaries, and to organize the medical services. Lastly, and equally important, we learned a great deal about the psychology of a nation and its people under devastating air bombardment and how well they can withstand it under desperate odds. It required splendid organization and the discipline of an enlightened and coöperative citizenry, and it also required great leaders.

Now then, how many of the advantages I have attempted to describe will we have if we are compelled to fight another war?

We not only will not have these advantages of time and the opportunity to capitalize on the experiences of other nations, allies or enemies, but it appears that it will be quite a different type of war, and one for which we are not presently prepared. "A country with constitutional processes like ours will be at a disadvantage, for it is probable that the enemy would get in the first blow and if the enemy is a tight police state, it might be difficult for intelligence to forearm us with forewarning."

It is not my province, nor does time permit me to set forth any views as to the proper organization of the civilian populace for another war. It appears that the civil population will be the "cannon fodder" and particularly those in our industrial cities. Certainly some over-all plan, requiring coördination of Federal, state and local agencies must be adopted and implemented at an opportune time. We must take into account the protection of civilians to a degree that was not thought of even a few years ago.

However, the medical profession can and should be in a continual state of preparedness. It is not prepared now.

This lack of preparedness on the part of the medical and nursing professions, and of our hospitals, is known and acknowledged by all members of the organized medical profession, and has been emphasized repeatedly by its responsible leaders. In the correction of this situation, and in the participation in the program of the American Medical Association, this Society, under its enlightened leadership, is playing a prominent and effective part.

The profession will be called upon for much more than the exercise of routine professional work, and much more is needed in the way of individual preparation than is afforded a graduate of the medical schools of today. The public has a right to expect its doctors to be prepared to assume all of the responsibilities which fall to their lot in times of national disaster.

The responsibilities will fall upon all members of the profession, young and old, and upon the stay-at-homes as well as those called to military service.

The Navy has had an unusual opportunity for much practical experience in the field of radiological safety and methods of decontamination as a result of the Bikini experiments. Studies instituted as a result of the findings on the target vessels are bringing forth much significant information.

In order that the Bureau of Medicine and Surgery might fully discharge its obligations in this field it has established an independent division devoted entirely to the medical aspects of atomic defense and headed by an outstanding radiologist. Under the supervision of this division, the radiological safety section administers the medical units in the various naval activities in which work is progressing and compiles the extensive health regulations required. The section on industrial atomic medicine is interested in the various problems associated with manufacturing and atomic propulsion. A training section supervises all training in the service as well as in civilian institutions. The research section controls the productive activities at our Radiation Laboratory in San Francisco as well as at the Naval Medical Research Institute, and is particularly interested in the fields of radiochemistry and radio-biology.

For men who are interested in any of the various medical phases of atomic energy, the opportunities for research and other work in this field, within the services, are practically unlimited. Graduate work at civilian institutions is available to those particularly interested. More such men are greatly needed.

All of the armed forces are making an earnest effort, within their personnel and financial limitations, to raise the general level of knowledge in these important subjects among all their officers. In this mission the highest degree of coöperation and mutual support has existed. In these efforts members of civilian organizations, the Armed Services, the Public Health Service, the Veterans Administration, the Atomic Energy Commission, and the Armed Forces Special Weapons Project are all participating wholeheartedly; all are giving freely of their time and their ability in this instruction.

In a program pointing toward the preparedness of medicine, certainly the lessons learned by those physicians who took a part in the last War will prove invaluable in organization and will undoubtedly provide leadership in the medical aspects of civilian defense. However, even this group, some 60,000 in number, is not fully prepared for its part in the national defense unless they acquire knowledge of the principles of radiological safety and of atomic defense, together with a familiarity with the potentialities of other

(*Continued on page 255*)

THERAPY OF THE AGED*

EDWARD J. STIEGLITZ, M.D., F.A.C.P.
Washington

DESPITE its brevity and inconspicuousness, the word "of" is most significant in the title, "Therapy of the Aged." It implies primary concern with treatment of people, not solely with therapy of more or less specific disease entities. Too often clinicians and investigators focus their diagnostic and therapeutic attention upon the disease so sharply that the patient who is ill becomes but a blurred background. This tendency to limit one's perspective is a poor habit we all were apt to acquire in medical school. For many years the basic objective of medical education has been to teach the medical student to look for, identify, and treat specific diseases. Habits are not readily altered.

Narrowing perspective to disease, in contradistinction to the patient who is ill, has not only affected our therapeutic methods, objectives and philosophy, but has also engendered the erroneous assumption that health is that state of being existing in the absence of demonstrable disease. Such is the definition of health in even very modern medical dictionaries! Health is much more than the absence of disease. Health is a quantitatively variable state involving reserve functional capacities. Perfect health is an ideal, an abstraction, which may be approached but probably is never actually attained. Ideal health implies maximum reserve capacities of all the functions of the organism, mental as well as physical. In youth, when physical reserves are at their peak, emotional and intellectual capacities are immature; as these develop with the years physical reserves decline. Health is always relative; illness constitutes a gross impairment of health, but lesser degrees of depreciation occur insidiously from aging alone.

Constant awareness of the relativity of health is prerequisite to good geriatric medicine.[1] Unfortunately, it is necessary to emphasize that geriatrics is much more than the care of the senile.[2] Geriatric medicine includes the care of the aging as well as the aged, and both those apparently well and those obviously ill. It is significant that these divisions cannot be defined arbitrarily. The borderline between normal and abnormal is hazy; there can be no sharp line of demarcation between aging and aged people. Aging starts with conception and continues until death though at a diminishing rate of change. The rate of aging change varies between different species, different individuals of the same species, and different structures and functions of the same individual. Biologic age is not synonymous with chronologic age; the calendar years alone do not measure senility. Some of us here are prematurely senile; a few are biologically younger than their years, at least in part.

The two decades from 40 to 60 are the most important and interesting periods to geriatric medicine. It is in "later maturity," which is a kinder term than "senescence," that the disorders which disable us in later years first become manifest. At this earlier stage in their pathogenesis they are far more amenable to therapeutic control than later when irreversible and irreparable damage has occurred. If health is maintained until 60, we have little reason to be anxious over the second half of the second forty years.[3] Furthermore, the aging far outnumber the aged. However, I have been asked to discuss therapy of the aged, and I shall therefore limit my remarks to those concerning people already old. This group is composed largely of those over 70, plus a goodly percentage of those chronologically younger but biologically prematurely senile.

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* Read at the Eighteenth Annual Scientific Assembly of the Society, October 8, 1947.

Therapy of the aged differs from treatment of other age groups because of: (1) certain structural, physiologic and psychologic characteristics peculiar to advanced age, and (2) certain significant characteristics of the more common disorders of older people. These two groups of variables can be considered separately.

Characteristics of Age Change Affecting Therapy

To age is to change. Pediatrics made its greatest advance when it was realized that the child is not merely "the little man" but presented certain characteristics of structure, nutrition, physiology, metabolism, immunity, and the like which are peculiar to his age. The same is true of senescence and senility. Older people are different, not merely older. These differences are most important. Obviously it is impossible here to discuss all of the many and complex changes which are the consequences of the element of time in living.[4] I must content myself with considering but a few of the more significant effects which affect therapy.

Individual Variation.—With advancing age there occurs an increasing divergence among individuals. We are today what we are largely because of our yesterdays. The older we become the more yesterdays have affected us. No two people experience the same injuries, intoxications, infections, nutritional insults, fatigues, or emotional traumata. In no two instances are these vicissitudes of existence identical in character, in severity, or in sequence. Thus, there is urgent necessity for individualization in diagnostic study, in prognostication and, most especially, in therapy. Geriatrics, to be truly effective, must avoid routinization of therapy. Each and every older patient is a problem in himself, differing from all other patients to a degree that warrants constant consideration. The background and present functional state must be individually evaluated before prescribing treatment. Generalizations are dangerous.

Accumulated Injuries.—Living involves a long and varied series of insults and injuries. Many of these are unavoidable except by existence in a sterilized environment, and such would not be living. Some injurious experiences are necessary for the development of powers to protect us from more serious damage; certainly the reaction to typhoid or smallpox vaccine is less detrimental than an attack of either typhoid fever or smallpox. We cannot develop courage without having experienced fear, nor muscular strength without hard work. Yet every toxic, psychic or traumatic injury leaves some residue of scarring behind. The detriment may or may not be apparent. The consequences are often long delayed. We cannot see the "cloudy swelling" of parenchymal tissues associated with fever, but it occurs nevertheless and subsidence of the acute intoxication does not mean perfect repair of the damage. There is always some residue. The cumulative effect of these many and varied insults is considerable, particularly in older individuals. Even pathologists are unable to distinguish what structural changes in old age are due to aging per se (passage of time), and what are consequent to accumulation of minor injuries. Evaluation of functional depreciation is even more difficult.

Often it is extremely difficult to differentiate the origin of observed clinical phenomena (symptoms and signs) in older patients. Evidences of disordered function may be due to preëxistent disorders or to an acute malady superimposed upon a previous asymptomatic impairment. It is in this connection that geriatric medicine stands in sharpest contrast to pediatrics. The pediatrician has the right to assume that prior to an acute illness the child was fundamentally well and that therefore all the symptoms and signs observed are due to the acute disorder. In geriatrics we must assume exactly the opposite: that prior to an acute illness the patient was not truly healthy and that many of the clues of disturbed function may be due to preëxistent conditions. These are important considerations not only in diagnosis, but also in therapy and prognostication.

Accurate periodic appraisal of the older person's structural and physiologic status during relatively good health is the only way by which we may establish a base line and thus be in a position to evaluate the significance of clinical phenomena observed in an acute illness. Without the data elicited by a periodic health inventory the clinician is greatly handicapped. One of the most significant prognostic criteria in acute illness of the aged is their functional state prior to the onset of the acute disorder. The previous cardiac reserve, nutritional state, and renal functional capacity determine the outcome of virus pneumonia quite as much as the therapy applied to the acute infection.

Lowered Homeostatic Efficiency.—The internal milieu of the organism remains nearly constant throughout the life span, and the ranges of almost all the "physiologic constants," such as temperature, pulse rate, concentration of glucose, protein, chloride, calcium, and the like in the blood are about the same at 80 as at 8. Nevertheless, the ability to maintain constancy of all the many equilibria depreciates with advancing age. Tolerances for stresses of all sort are diminished; older individuals cannot adjust as well as younger adults to extremes of temperature, dehydration, starvation, excesses of carbohydrates, and the like. Early lowering of the efficiency of the homeostatic mechanisms is revealed only by response to stress. Acute illness may create such stresses that a break in tolerance, or decompensation, is first discovered during an acute disease. This does not mean, for example, that diabetes mellitus begins at the time of an acute infection. It may have been latent for some time, but gross symptoms are absent until the stress of an infection precipitates an acute clinically obvious episode of hyperglycemia. The clinical function tests involving stress, such as the glucose tolerance test or the renal concentration test, are particularly valuable in detecting depreciations before they are so extensive that they become obvious.

The clinical significance of lowered homeostatic efficiency is three-fold. In the first place, symptoms and signs of disease are much less conspicuous in older patients. Most of the clinical phenomena indicative of disease, such as fever, are manifestations of the reactions of the organism. In older individuals these reactions are much less violent, and thus most illnesses are relatively asymptomatic. Minor deviations and subtle suggestions of dysfunction take on greater significance. We must not only look for signs of altered function, but learn to see them early. If we wait until symptoms are obvious, more often than not therapeutic intervention will be too late.

Secondly, the weakened homeostatic mechanisms are a factor in slowing repair after injury. It is well known that fractures heal more slowly as we grow older. Wound healing is likewise retarded. The relationship of the rate of healing to age is so close that DuNoüy[5] was able to work out a mathematical formula and predict the rate of healing or deduce the age of the patient if the healing rate was known. However, we must not forget that the need for extra time for repair applies also to less obvious injuries, the effects of infective and other intoxications. For practical clinical purposes, we may say that for each 5 years we have lived it takes us an additional 24 hours to accomplish postinfective repair. Whereas, 5-year-old Willie may recover from the effects of a sore throat or grippe in 24 hours of normal temperature, 60-year-old Grandpa may require 12 days for the convalescence.

The third therapeutic implication is most important. Because of lessened homeostatic efficiency, the older patient has a much narrower margin in tolerating functional stress. Thus, the effects of any impairment are more serious; compensation for one deficiency by another physiologic mechanism is weakened. For example, both the aged and the very young are made very ill by dehydration. Anemia, even of moderate or slight degree, has more serious consequences in the elderly arteriosclerotic individual than in a young person with elastic and resilient arteries. When the lumen is narrowed and the quantity of blood flow reduced, the quality of what does reach the tissue capillaries becomes of paramount importance. The cardiac load of obesity may be carried by a young myocardium, but the extra work involved in carrying overweight in later years may mean the difference between cardiac competence for reasonable activity and true heart failure. Treatment of the aged must neglect no detail in trying to bring weight, hemoglobin, blood protein, blood sugar, and the like to optimum levels. The vital need for these considerations in pre- and postoperative management of geriatric surgical patients should be fairly obvious.[6] However, this aspect of treatment is just as pertinent in less dramatic medical situations.

Habits.—Habits, good, bad or indifferent, are acquired and fixed by repetition over a period of time. The element of time is absolutely requisite. Therefore, age is a significant element in habit formation. Habits of eating, smoking, sleeping, exercise, alcohol, etc., become fixed in the aged. It is important not to insist upon abrupt changes in the habits of aged patients. They can be modified slowly and gradually, but abrupt and radical changes in the mode of life are physically upsetting as well as emotionally disturbing. Furthermore, if the advice anent habits is too restrictive, the patient will not follow the therapeutic suggestions and nothing whatever is accomplished.

Occasionally one sees an aged patient who for many years has lived on an outrageously unbalanced diet which should, according to our most recent scientific knowledge, have led to serious nutritional deficiency. Nevertheless, the mere act of survival to ripe senility is convincing evidence that perhaps this scientifically "monstrous" diet is not quite as bad as we might think. The habits of the senile are to be respected; perhaps experience has taught them what they, as individuals, can best tolerate. The characteristic of individual variability, increasing with the years, must never be forgotten.

Altered Reaction to Drugs.—Senescence brings about changes in pharmacodynamic responses. Certain drugs are poorly tolerated by the aged. All the barbiturate sedatives are likely to excite and confuse the aged. Disorientation, forgetfulness, unsteadiness, and apprehension are more often enhanced than diminished. Bromides and potassium thiocyanate, often prescribed indiscriminately for hypertensive individuals, frequently accumulate because of impaired renal elimination and lead to serious intoxication. It must not be forgotten that bromidism is often associated with excitation, and that further ingestion of more bromide ions aggravates the condition. Paraldehyde is a safe sedative for aged patients.

On the other hand, tolerance for the nitrites (sodium nitrite, amyl nitrite, bismuth subnitrate) and the alkyl nitrates (glycerol trinitrate, erythrol tetranitrate, and mannitol hexanitrate), alcohol, and the opiates is increased. Tolerance for caffeine and/or tobacco is variable; individual variations appear to be independent of age. Alcohol in moderation is an extremely useful adjunct in the management of the aged. It supplies quick fuel, relaxes tensions, increases appetite, and is probably useful as a coronary vasodilator. A glass of wine or a highball before dinner and another at bedtime is often most constructive in increasing vigor and endurance in the elderly.

Nutritional Variations.—Here again we are confronted with the element of habit, our dietary being largely determined by habits. For example, older people rarely increase their salt intake in hot weather unless told to do so. They keep in the rut of habit. The same situation applies to fluid consumption, the use of milk (calcium depletion is common in the aged), and caloric intake. Dietary advice to older persons must be specific, detailed, and considerate of their lifelong habits.

The utilization of foods is affected by age. Inadequate dentures may interfere with proper mastication. Many a case of irritable colon is due primarily to the ingestion of roughage foods improperly chewed. The senile bowel is tender, thinned, and does not tolerate abuse with cathartics or roughage. We also must remember that tolerance for glucose is often depressed in the aging and the aged long before frank diabetes is apparent. The dietary must be balanced. The tendency of older people is to eat an excessive amount of carbohydrates and a deficient amount of protein. This is in part a matter of economy, both financial and in the effort of preparation and consumption.

Anorexia is sometimes psychogenic, especially when the "will to live" is weakened by long and distressing disablement. Liberal amounts of the vitamin B complex are indicated. Small, frequent feedings are often much better tolerated than large meals. Where the appetite is poor, one of the most important considerations is that the food supplied be easy to eat. I have seen patients refuse a squab but eat a hamburger; refuse a salad but eat apple sauce. They are not interested enough in eating to take the trouble to pick the meat of the squab, whereas the hamburger or apple sauce require little chewing. Considerable food can be obtained in beverage form if the appetite is very poor. The old adage to the effect that "you can lead a horse to water, but you can't make him drink" should be revised to read, "you can lead a horse to water and you can make him drink, if you salt his oats." Salt, by increasing thirst, is often a useful stimulant to appetite.

But obesity is a more frequent and more serious problem than undernutrition in geriatric medicine. Both are forms of malnutrition. Obesity is particularly significant in the two decades from 40 to 60; it is rare in the truly senile, for obese senescents infrequently survive into old age. Of 10 fat men at 30, 6 will survive to 60, 3 to 70, and perhaps 1 to 80; of 10 lean men, 8 will reach 60, 5 will attain 70, and 3 will live out their full second 40 years.[3] When obesity complicates the chronic diseases common in the later half of life, its effects on expectancy are even more severe. The death rate of obese diabetics is $2\frac{1}{2}$ times as great as that of diabetic patients of normal weight. Weight in excess of 25 per cent of the normal increases mortality to 174 per cent of the normal expectancy in otherwise well individuals.

Although it is common for people to gain weight after 40, a fact that was formerly considered "normal," we now know that gains affect longevity and health adversely. If weight is normal at the age of 25, there should be no gain thereafter.[3] One important contributing factor to the frequency of obesity in senescence is the gradual physiologic reduction of metabolic requirements which comes with aging, without a compensatory curtailment of caloric intake. The elderly require less calories even if they are active, but they tend to eat the same as in early maturity because of fixation of dietary habits. However, the treatment of obesity in later maturity is so large and significant a subject that it deserves discussion on some other occasion.

Psychologic Factors.—Aging brings about mental changes as well as physical alterations, even in the absence of disease. Both emotionally and intellectually older persons differ from what they were in early and middle maturity. These changes are significant in both diagnosis and therapy of the aged; they affect our interpretation of observed phenomena and limit our therapeutics.

Personality characteristics are not qualitatively altered by aging. Quantitatively they become intensified and fixed. "The leopard does not change his spots"; they become blacker. The querulous complainer or "clinging vine" becomes hypochondriac and more helpless and demanding; the sanctimonious become opinionated bigots, the generous become more liberal (at times to the point where they may give away everything they have), the stingy become increasingly miserly, and the tolerant become even more liberal and understanding. I seriously doubt if there is such a thing as "second childhood"; those who become conspicuously childish in their dotage are merely revealing the continuation of their first childhood. They never did grow up. Immaturity may be fairly well concealed by conventionality in the intermediate years. Careful observation of typically conventional adults quickly reveals their innate immaturity.

Memory, particularly for recent events, becomes unreliable in the aged. Therefore, clinical histories are often unintentionally misleading because of omissions, and it may be desirable to go back over the ground again and again. Therapeutic instructions must be precisely specific and should be either written or stated in the presence of a younger member of the family or nurse. We cannot rely upon the senile remembering a half dozen or more therapeutic suggestions given orally at a time when they are confused and excited by the unusual trip to the physician. Impairment of memory is not due solely to depreciation of the ability to remember; much of the impairment stems from inattention and lessened interest. The old man forgets names and telephone numbers partly because they have less significance to him than in former years. Similarly, the ability to learn depreciates much more slowly than is commonly thought, if the desire to learn is persistently cultivated. At 80 the ability to learn is about the same as at 12, with the peak occurring at 22. For "the old dog to learn new tricks" he must want to learn, and his teacher must know more than "the dog"!

The supreme tragedy of senility is a growing awareness of uselessness. We all need to be needed. The truly aged are not needed by their families or by society today. Their awareness of this and the sense of insecurity which this engenders are frequently major factors in psychogenic disorders of the senium. Perhaps one of the most potent and valuable therapeutic tools in the treatment of the aged is to give them purpose in life, although the significance of purpose to health is not limited to the later years. Too frequently the intellectually competent old person is aware of the fact that his family is hoping and waiting for him to die. In arteriosclerotic dementia there is a close relation between this painful realization and the development of the violent paranoid antagonisms against those presumably nearest and dearest. The borderline between mental health and disease is just as indefinite and broad as the relativity of somatic health. Recently I learned that when some 30 hospitalized senile and/or arteriosclerotic women were transferred to foster homes where they undertook to act as grandmothers, only 2 required readmission to the mental hospital; the others made splendid adjustments largely because they once more were and felt useful.

CHARACTERISTICS OF THE DISEASES COMMONLY ENCOUNTERED IN THE AGED

Although we may see almost any disease occurring in old people, the so-called degenerative diseases are by far the most frequent and significant. These chronic, progressive disorders are of immense and growing importance; they constitute the gravest menace to continued vigor and usefulness of those reaching later maturity.[7] Four major groups of these disorders exist:

1. Circulatory impairments
2. Metabolic dysfunctions
3. The arthritides
4. Neoplasms

The circulatory and metabolic groups are most important from the viewpoints of frequency, disablement, and mortality. Included are hypertensive arterial disease, arteriosclerosis (cerebral, coronary, renal, acral, pancreatic, etc.), anemia, diabetes mellitus, thyroid imbalance, gout, and both the male and female climacteric. Obviously it is impossible to discuss all these here. However, I should point out certain generic characteristics or common denominators which affect therapy.

Etiology.—These disorders all arise from multiple and variable etiologic factors.[8] They are endogenous. The causative influences are cumulative and obscure. In no two instances is the causation necessarily identical. A combination of insults lasting over a long period of time, individually differing in character, sequence, and intensity, cause the degenerative lesions. Each case is a wholly individual problem. No one will ever find "the cause" of hypertensive disease or diabetes. Causation is always multiple.[9] As both curative and preventive therapy must be based upon correction of etiology to be truly effective, the obscurity of the causation of these disorders constitutes our greatest handicap to successful treatment. Unremitting search and research for contributing causative factors is prerequisite to therapeutic success.

Onset and Early Course. These disorders all begin asymptomatically. They are "fifth column" diseases, silent saboteurs. Thus, to be discovered early, they must be searched for. Furthermore, what symptoms do arise are secondary and indirect. For examples, there is no kinesthetic sense by which the patient is made aware of the fact that his arterial tension is high; impairment of the circulation to the brain produces neurologic symptoms and signs; and impairment of the pancreatic circulation may cause diabetes mellitus with an entirely different set of clinical phenomena; yet all are due to fundamentally identical circulatory inadequacy. Symptoms are expressions of functional changes of the parenchymatous structures although the primary disorder exists in the matrix tissues.

Parenchymal Injury.—All these disorders do damage by impairing the nutrition of various parenchymal tissues. One or more of the following mechanisms are involved[10]:

1. Inadequate supply
2. Ineffective transport
3. Inefficient utilization
4. Insufficient removal of metabolic débris

These factors often overlap. For example, histanoxia, or cellular oxygen inadequacy, may be induced by a combination of lowered cardiac efficiency, hypertensive arteriolar constriction with capillary stasis, and anemia. If glucose combustion is likewise impaired because of hypo-insulinism, the impairment of tissue metabolism is further aggravated. Recovery from congestive cardiac failure is often much accelerated by liberal oral glucose administration and/or large doses of the vitamin B complex in addition to the conventional therapy of digitalization and bed rest. The nutrition of an exhausted or injured structure is vitally significant. Correction of metabolic defects is the essence of geriatric therapeutics.

Progression.—Progressiveness, slow but diabolically persistent, is characteristic of all these degenerative disorders. None is self-limited. Three therapeutic implications of this universal attribute are worthy of special mention: 1. To be successful, therapy must be instituted early in the course of these diseases before permanent, irrevocable and irreparable organic changes become manifest. To discover arteriosclerosis, diabetes mellitus, and the like early, we must search for them in the relatively well adult. 2. Frequently, maintenance of the patient in the status quo is a true therapeutic accomplishment. Late in the course of these disorders all we can hope to attain is an arrest or retardation of the progression. It is often wisest to explain this to the patient, who then may cease searching for impossible miracles.[3] 3. Prolonged disability prior to final death is to be expected. From the viewpoint of geriatrics as a social problem, this is perhaps the most important facet of the whole question. Delay of disablement becomes our major therapeutic objective. These disorders are not curable in the usually accepted sense, but they are controllable and can be retarded in their progression. There is often greater hazard in limiting the activities of the chronically ill senile than in encouraging them to be more active.

Overlapping Multiplicity. These disorders rarely occur alone. Usually several are superimposed. None of them confer immunity; rather do they make the patient more vulnerable to other so-called degenerative depreciations. Mixed forms are common and one must be on his guard against too precise definition of entities. For example, arteriosclerosis with preponderant cardiac (coronary) symptoms probably does not occur without less obvious but significant cerebral and renal arteriosclerosis. In hypertensive arterial disease[1] one must assume simultaneous cardiac injury. Hypothyroidism impairs the efficiency of all the tissues. In the aged one frequently finds hypertrophic arthritis and gout superimposed. Anemia is more often than not of mixed pathogenesis, due both to nutritional deficiency and primary hematopoietic failure. This factor of overlapping must be given careful consideration in any therapeutic program for aged patients.

SUMMARY

The essential requisites of therapy of the aged, briefly recapitulated, are:

1. A thorough knowledge of physiology, especially of the homeostatic mechanisms.

2. Comprehension of the changes in function and structure induced by aging per se.

3. Awareness of the functional consequences of the degenerative disorders.

4. An attitude of prophylaxis, continuously applied by periodic inventory of the apparently well senescent with a search for early functional depreciations, by anticipation of what we know will come, by prevention of avoidable disease through correction of those factors which we know contribute to the degenerative changes, such as obesity, and by education of adults in better hygiene.

5. Constant consciousness that health is relative, never absolute. The essence of geriatric medicine is to seek to build health to as near the optimum as possible through periodic health consultations.[7] This is constructive medicine. The aged person in reasonably good health prior to an acute illness is a vastly better risk than one in poor condition. A base-line is a necessity in evaluating the signs and symptoms of acute disease in the aged.

6. Thoroughness in analysis of the history, of the physical examination, and of laboratory studies, since the chronic progressive disorders are extraordinarily insidious in their onset. One must attain great patience to listen to and consider all details. The elderly have a long story to tell. They are what they are today because of their yesterdays. It is in the past that we are most likely to discover the causative factors inducing present impairment. Without understanding of etiology we cannot be intelligent in therapy.

7. The focus of therapy must be upon the individual rather than upon his disease or diseases. The individual is indivisible; psyche and soma are one. Insulin does not suffice for the anxious diabetic; nor does emotional equanimity come to the exhausted anemic patient. The interrelations of all the chemical and psychosomatic components which make up the individual demand consideration. The patient is more important than his disorders.

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GASTROINTESTINAL ENDOSCOPY

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IN RECENT years endoscopic methods have aided greatly in establishing earlier diagnosis and in instituting earlier therapy, both medical and surgical. The emphasis on earlier diagnosis to attain earlier treatment in the clinical management of cancer gives impetus to more widespread dissemination of endoscopic technic and the valuable diagnostic information obtainable therefrom. Wide interest in this field, including bronchoscopy and esophagoscopy, which are not covered in this article, is manifested by the annual literature reviews of Benedict, the latest of which[1] appeared recently. It is significant that the standards promulgated by the Council on Medical Education and Hospitals of the American Medical Association[2] for the newly established residency in gastroenterology, a subdivision of training in internal medicine, make mandatory training in proctosigmoidoscopy, gastroscopy, and peritoneoscopy.

PROCTOSIGMOIDOSCOPY

The endoscopic examination of the rectum and lower part of the sigmoid should be considered as routine in all cases with symptomatology directly or even remotely related to the terminal portion of the large intestine. Rectal bleeding or discharge, diarrhea, constipation, dyschezia, and change of bowel habits are obvious symptoms demanding proctosigmoidoscopy. In a lesser number of cases such diverse presenting symptoms as ocular manifestations, joint pains, continuous fever,[3] weakness, anorexia, loss of weight, and physical signs, such as hepatomegaly and clubbing of the fingers, may have their etiologies revealed by this examination.

In the study of intestinal taeniasis, obtaining material for direct and cultural examination through the sigmoidoscope from suspicious-appearing areas may afford a higher yield of positive diagnosis than routine stool specimens. Johnson and Berry[4] reported a pathognomonic sigmoidoscopic finding in 67 per cent of early cases of Asiatic schistosomiasis. Small, firm, yellow nodules 1 to 3 mm. in diameter, occurring in clusters of 3 to 25 beneath the mucosa and most abundant at or near the rectosigmoid junction, may be seen before ova can be demonstrated in the stools. Biopsy of rectal tissue through the sigmoidoscope is a safe procedure and can be accomplished with various types of forceps. Geib, Sher and Cheney[5] using flexible cystoscopic rongeur forceps in 56 patients, found 14 positive rectal tissue biopsies in cases in which repeated examinations of the stool were negative for *S. mansoni.*

In the diagnosis of the various colitides, endoscopic study is essential. Chronic idiopathic ulcerative colitis is a systemic disease which has protean manifestations. Only by endoscopy can the course of this disease as it affects the lower bowel be followed with certainty. Smith[6] points out that negative information often is of as much importance as positive findings. This is illustrated in cases in which patients are treated for ulcerative colitis when they do not have this disease.

In the study of the functional disturbances of the bowel variously called spastic colitis or mucous colitis and probably best termed irritable colon, proctosigmoidoscopy is necessary to rule out organic disease. The use of this procedure has aided greatly in elucidating the psychosomatic factors involved in these states. White, Cobb and Jones[7] have presented clinical data showing that mucous colitis often occurs as a bodily response to life situations which threaten security. The spasm, engorgement, and hypersecretion so often observed sigmoidoscopically in these cases are the functional basis of the symptoms. These findings could be reproduced in human volunteers by the topical application of various parasympatheticomimetic preparations. Almy and Tulin,[8] in an experimental study on 7 healthy medical students, were able to demonstrate changes in the motility, vascularity and secretion of the sigmoid colon in response to various painful stresses. These alterations of functions of the colon occurring in healthy subjects as part of a general reaction to distressing pain are similar in kind and degree to those seen in patients with irritable colon.

Probably the most important usage is in the diagnosis of carcinoma of the terminal bowel. Attention is directed to the very important study of carcinoma of the large intestine from the Mayo Clinic.[9] This revealed that of 817 patients with carcinoma of the large intestine, 576 patients, or 70.5 per cent of the total series, had carcinomas which were visualized by the sigmoidoscope. Of these 576 patients, the lesion was palpable in 444, or 54.3 per cent, by digital examination. Routinely, digital examination precedes and is an integral part of the sigmoidoscopic examination. Each method of examination gives different information. By sigmoidoscopy, the location and extent of the lesion, the degree of obstruction, the degree of mobility and fixation of the lesion can be determined and a specimen of tissue for biopsy can be obtained. The authors show 1 of 4 of these 576 patients received some form of treatment for disease of the rectum or colon but not for carcinoma during the course of their symptoms arising from the unsuspected carcinoma. This study reveals, as nothing else can in terms of unnecessarily belated diagnoses and forms of treatment due to diagnostic errors, the necessity for more routine use of sigmoidoscopy in detecting this cancer which is amenable to curative surgery if diagnosed comparatively early. Another article[10] appearing recently also stresses the part of the physician in not making earlier diagnosis in detection of cancer.

The technic of proctosigmoidoscopy is not difficult to master, but its teaching is somewhat neglected. Many doctors go through medical school and internship without having performed the procedure, and, indeed, in some cases, without having been shown how to do the procedure properly. The necessary equipment is not expensive and is not cumbersome. It can be done as an office procedure, in an examining room, or if necessary, at the bedside. That it is a procedure that belongs in the accomplishments of every practitioner of medicine and should not require the specialist, has again been emphasized by Ortmayer.[11] That it is not without its dangers is well known, as has been recently emphasized by Andreason[12] who adds 46 cases of perforation of the rectum due to proctoscopy to the 48 cases already reported. About half of these cases ended in a fatal issue. We feel that the main reason behind such unfortunate instances lies in the lack of attention given to the teaching of proper technic and adequate supervision in the medical school and teaching hospital. I am in agreement with Andreason's emphasis on passage of the instrument under visual guidance and the danger of air inflation as a guide to passage of the sigmoidoscope. Smith's article[6] contains a good summary of technic in performance of sigmoidoscopy.

GASTROSCOPY

Unlike proctosigmoidoscopy, gastroscopy is a procedure requiring special postgraduate training with a skilled teacher. However, it is not necessarily a hospital procedure and can, in many cases, be done on an outpatient or office basis. The dangers of this procedure when proper preparation and technic are used are of little consequence. The number of reported perforations of the esophogus and stomach is smaller by many times the reported perforations of the rectum in proctosigmoidoscopy. Schindler[13, 14] by the questionnaire method reported that 22,351 gastroscopies done by 60 operators resulted in but 1 fatality. There were 7 other perforations of the stomach and 1 of the jejunum, in none of which the patient died. Fletcher and Jones[15] using the stiffer and wider (by 2 mm.) English-made Hermon Taylor gastroscope have had 2 fatalities in 2,800 gastroscopic examinations. Of interest are 2 case reports[16, 17] of pneumoperitoneum due to apparent perforation during gastroscopy. At operation 3 and 14 hours later, respectively, thorough examination of stomach and abdominal portion of the esophagus revealed no trace of a lesion. Both patients recovered. For the patient the procedure is not painful but may be uncomfortable, and he should so be informed in advance, since coöperation of the patient is important in obtaining good results. The technical limitations of gastroscopy, such as blind areas and inability to get good views of the antrum and pylorus, are well realized and reports should include the areas not seen as well as those noted.

Moersch[18] lists as contraindications to gastroscopy the presence of severe cardiac or respiratory disease, esophageal disease, deformities of the vertebral column, convulsive disorders, and active gastric bleeding.

It must be emphasized that gastroscopy is a complementary and not a rival method to roentgenology in examining the stomach. Benedict in 2 noteworthy articles[19, 20] repeatedly stressed this point, showing that the incidence of correct gastric diagnosis is higher when both methods are used than when either alone is available. X-ray examination is practically always done prior to gastroscopy, since information as to pathology in the esophagus may contraindicate gastroscopy, and retained stomach secretions may demand prior gastric lavage. As with any procedure which depends on subjective interpretation of observed phenomena such as color, movement, reflection of light, and perception of depth, the accuracy of the examiner in making correct diagnosis depends on his training and experience with the normal and abnormal stomach. However, regard for the history, physical, laboratory, and X-ray findings remains the sound basis for proper use of gastroscopy. What then may this method offer?

A diagnosis of gastritis is no longer tenable without gastroscopic confirmation. The results of many years' study in this field are now available in the recently published book by Schindler,[21] the pioneer in this field. For practical clinical purposes there are 3 varieties of gastritis: acute superficial, chronic hypertrophic, and atrophic.

That the clinical and gastroscopic findings of chronic gastritis cannot always be correlated is acknowledged by many in this field.[22, 23, 24] It has been pointed out before[25] and again recently by Palmer[26] that cases of so-called gastric neurosis may indeed be cases of gastritis, as shown gastroscopically.

Benedict[27] studied 117 cases of hypertrophic gastritis without other gastric or duodenal disease. Epigastric pain with striking similarity to ulcer pain was the commonest symptom, occurring in 74 per cent of cases. Other frequent symptoms were vomiting (45 per cent), hemorrhage (42 per cent), "gas" (41 per cent), sour eructation (16 per cent), and heartburn (15 cent). In a characteristically thorough fashion, Benedict and Mallory[28] carefully studied 51 cases of resected stomachs to correlate the gastroscopic with pathologic findings in gastritis. There was complete or partial agreement between the pathologist and gastroscopist in 88 per cent of the cases.

Of the gastritides, the atrophic variety, with a pale smooth mucosa, few if any rugae noted, and visible blood vessels, is most susceptible to rather accurate clinical and gastroscopic correlation. The accompanying atrophic gastritis in pernicious anemia is quite well known. The effect of crude extract of liver given intramuscularly on the clinical and gastroscopic picture in the atrophic gastritis of pernicious anemia has been delineated by Jones, Benedict, and Hampton.[29] In a continuation of this study Benedict[30] showed that gastric atrophy, with and without pernicious anemia, may improve as noted gastroscopically after prolonged intensive liver therapy. The high incidence of stomach tumors in gastric atrophy is also reiterated. Kaplan and Rigler[31, 32] have indisputably shown the increased incidence of gastric tumors, malignant and benign, in pernicious anemia. Early diagnosis and therapy of such tumors in pernicious anemia with good chance of cure can be attained only by persistent prolonged roentgenologic and gastroscopic examinations at 6- to 12-month intervals.

In the etiologic study of hematemesis, the answer is not always readily available. X-ray examination is safe at an earlier period than is ordinarily utilized. Schatzki[33] has again renewed the plea for earlier usage of diagnostic X-ray study in cases of hematemesis. If the patient is not in shock, or has been maintained out of shock for 24 hours, barium examination of the stomach with the Hampton technic is safe. Similarly, gastroscopy is a safe measure to utilize in such cases soon after bleeding stops. In some cases of hematemesis, with the rigid therapeutic régime usually instituted, superficial erosion and acute ulcers of the stomach and duodenum may heal completely by the time it is usually felt safe to allow the patient to undergo diagnostic study. A definitive diagnosis may be quite important in determining future management of the case.

Benedict[19, 20] has completely reviewed the subject of differentiating benign from malignant ulcer of the stomach. Suffice it to say here that both X-ray and gastroscopy, together and singly, are not without error, but this is minimized when both are used as complementary methods. All prepyloric lesions diagnosed by X-ray are suspect of being malignant. Gastroscopy may help in determining the issue. Necessarily repeated gastroscopic and roentgenologic observations may be required in the study of many cases of gastric ulcer. When one considers the careful data collected by Allen[34] at the Massachusetts General Hospital showing that 14 per cent of the patients treated as having benign ulcer proved to have carcinoma, he realizes that in the individual case this is a problem of some gravity requiring every possible diagnostic tool to aid in deciding whether or not radical surgery is urgent.

Occasionally, a case of gastric carcinoma not diagnosed by X-ray may be noted by gastroscopy. Confirmation of the X-ray findings by gastroscopy in carcinoma of the stomach is usually the case.

Gastroscopy may be quite valuable in the study of postoperative conditions of the stomach.[18] A satisfactory view of the interior of the stomach and stoma can be obtained in 85 per cent of cases in which operation has been performed. Gastric distress in such cases may be found to be due to severe gastritis. Recurring gastric ulcer or carcinoma, gastrojejunal ulcer and jejunitis, and malfunction of the stoma are other conditions noted gastroscopically that may be the cause of postoperative symptoms.

Other miscellaneous gastric conditions as syphilis, lymphosarcoma, diverticulum, foreign body, and polyps may be diagnosed with some degree of certainty by gastroscopy. It is considered as affording information of value only in conjunction with the general clinical picture.

To summarize then, gastroscopy should be used when the clinician or roentgenologist is in doubt about the diagnosis of gastric disease. It finds its greatest usefulness in gastritis, unexplained gastrointestinal hemorrhage, so-called gastric neurosis, gastric ulcer to differentiate benign from malignant ulcer, in persistent gastrointestinal symptoms when X-rays are negative or inconclusive, in carcinoma, and in the postoperative stomach.

PERITONEOSCOPY

Peritoneoscopy, like gastroscopy, is an endoscopic procedure requiring special equipment and training in technic. With little more discomfort and risk of danger than abdominal paracentesis, it may afford a great deal of information.

In a series of 435 peritoneoscopies[35] there were 3 deaths possibly attributable to the procedure. All 3 patients were critically ill, although many very sick patients can undergo the procedure safely. The enthusiasm for peritoneoscopy varies directly with the skill of the operator, and its usefulness varies in proportion to proper selection of cases by the clinician.

Its greatest use has been in cases in which the question of liver disease arises but in which the specific pathologic process is obscure. Of 435 peritoneoscopies performed by Benedict[36] 331 cases, or 70 per cent, fell in this category. In 260 of this latter group, liver disease diagnosed by biopsy included 170 patients with metastatic carcinoma, 73 with cirrhosis, and the remainder with various diseases including hepatoma, sarcoma, lymphoma, cholangitis, and polycystic liver. Metastatic nodules may be seen as well as biopsied, a distinct advantage over punch biopsy of the liver, which procedure will be the subject of another paper, in cases of suspected metastatic carcinoma of the liver. The differentiation of cirrhosis, with or without ascites, from suspected malignancy of the liver, primary or secondary, may be resolved by peritoneoscopy.

In cases of ascites in which the etiology is not clear, peritoneoscopy may well give the answer. In cases of metastatic peritoneal implants a biopsy can be obtained. By varying the position of the patient on the operating table a good view of the pelvic organs may be obtained. One may thus diagnose cases of ovarian tumors, with or without peritoneal implants, endometriosis, and chronic inflammatory disease of the pelvic organs.

Prior to major or radical surgery for carcinoma of the stomach or colon it may not be feasible on clinical grounds to determine whether hepatic metastasis is present. Since this may be an important factor in determining the type of procedure, or indeed in deciding whether laparotomy is indicated, peritoneoscopic examination and biopsy of liver may give conclusive evidence. Thus, in some cases the patient may be spared the expense and discomfort of undergoing the procedures preparatory to, and of the laparotomy itself. In this matter, Migueo Naraucio et al[37] have used the peritoneoscope chiefly in attempting to determine inoperability in borderline cases when clinical evidence of inoperability did not exist. In their series exploratory laparotomy was avoided in 48 per cent of cases, the brief period of hospitalization and lowered cost being of definite economic significance to the patient.

The procedure is also essential to the study of abdominal tumors. Garrey[38] states that in 25 per cent of the cases he has examined peritoneoscopically the findings fundamentally altered the treatment. In the other 75 per cent accurate confirmation of a suspected diagnosis was obtained.

As with the other endoscopic procedures, fitting its results into the clinical picture as a whole is essential. Prior to any endoscopic procedure it is assumed that the history, physical examination and such laboratory procedures deemed essential have been done. Proctosigmoidoscopy and peritoneoscopy, unlike gastroscopy, afford histologic diagnoses in some cases, since biopsies can be obtained with these procedures.

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(Continued on page 255)

THE SURGICAL TREATMENT OF HYPERTENSION*

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AMONG early attempts to lower blood pressure in hypertensive patients by surgical means was that of Adson,[1] who, in April 1924, performed a periarterial sympathectomy on the femoral artery in an effort to produce vasodilatation and enlargement of the vascular bed in a patient with hypertension, arteriosclerosis, chronic nephritis and terminal uremia. No improvement followed. Later, in November 1924, Rowntree and Adson[1] attempted to relieve hypertension by a bilateral lumbar sympathectomy but were able to produce only transient relief of symptoms and lowering of blood pressure levels. A few years later Crile[2] began a series of celiac plexus resections which resulted in some improvement of symptomatology, but only moderate lowering of pressures. In 1930 and 1933 Adson and Brown[3] divided the anterior spinal roots T_6 through L_2 bilaterally in 2 patients by laminectomy with significant prolonged relief of hypertension. The procedure was crippling, however, because of paralysis of abdominal muscles and the fact that the operative procedure itself was one of considerable magnitude. In 1933 Peet[4] began a series of supradiaphragmatic resections of the lower dorsal sympathetic ganglia and splanchnic nerves. In 1940 he was able to report 350 cases with a good percentage of favorable results. A clinical investigation of hypertension was begun by Smithwick[5] at the Massachusetts General Hospital in 1933 with the development of a 2-stage thoracolumbar resection of sympathetic ganglia T_6 to L_1 or L_2 inclusive and removal of the splanchnic nerves from the celiac ganglion to the mid-thoracic level. In 1944 Smithwick[6] was able to report over 500 operations of this type with an operative mortality of less than 3 per cent and excellent results in lowering of blood pressure levels in properly selected cases. This selection of cases on the basis of preoperative studies has been one of Smithwick's greatest contributions to the surgery of hypertension.

Indications for Operation

Persistent significant lowering of the diastolic pressure is the most important single criterion of success following sypathectomy for hypertension. Smithwick has divided postoperative cases into 5 groups depending upon the degree of lowering of the diastolic pressure: group 1, in which the diastolic pressure is lowered 30 mm. or more; group 2, 20 to 29 mm.; group 3, 10 to 19 mm.; group 4, 0 to 9 mm.; and group 5, in which the diastolic level is higher postoperatively than preoperatively.

Patients with low initial pulse pressures were discovered to have better results than those with high pulse pressures. Therefore, Smithwick divided patients into 3 types. In type I the initial pulse pressure is less than half the diastolic pressure. In type II the pulse pressure is equal to or up to 19 mm. higher than half the diastolic pressure. In type III the pulse pressure is greater than 19 mm. higher than half the diastolic pressure.

It is at least as important to determine when a sympathectomy for hypertension is contraindicated as to know when it is indicated. On the basis of preoperative classification of patients and postoperative results Smithwick has suggested several combinations of circumstances in which lumbodorsal sympathectomy is contraindicated. These are as follows:

1. In the presence of congestive heart failure

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* Read at the Eighteenth Annual Scientific Assembly of the Society, October 8, 1947.

and impaired kidney function, that is, elevated blood nonprotein nitrogen or reduction of phenolsulfonphthalein output to less than 15 per cent in the first 15 minutes.

2. In male patients with a resting diastolic pressure of 140 mm. of mercury or more, unless there has been no cerebral vascular accident, encephalopathy, impending heart failure, or impaired kidney function.

3. In female patients with a resting diastolic pressure of 140 mm. of mercury or more, provided phenolsulfonphthalein excretion is 10 per cent or less in the first 15 minutes.

4. In patients with lower diastolic levels, but with grade III eye ground changes, over 48 years to 50 years of age, and with previous cerebral accidents, or patients with a phenolsulfonphthalein output of 5 to 10 per cent or less, or patients with a poor fall in diastolic pressure on sedation with 9 grains of sodium amytal.

In well selected cases Smithwick has reported satisfactory results from operation in 85 per cent of cases.

PREOPERATIVE STUDY

The preoperative study which I have employed in cases of hypertension for which lumbodorsal sympathectomy is contemplated has included a thorough history and physical examination, fasting nonprotein nitrogen, Wassermann test, hematocrit reading, serum protein, cholesterol, hemoglobin, eyeground studies with fully dilated pupils, 7-foot heart X-ray film, electrocardiogram, clinical evaluation of the heart, repeat urinalyses, 12-hour urine concentration test, intravenous phenolsulfonphthalein test, intravenous pyelogram, 4-hourly blood pressure recordings, and postural, cold pressor and sedation tests. The selection of cases has been made largely on the basis of this study after a thorough discussion of each individual situation with the patient involved.

The postural and cold pressor tests are best performed after 2 or 3 days of hospitalization, most of which have been spent in bed. The patient rests for 15 or 20 minutes in a quiet environment, after which blood pressure and pulse readings are taken every minute for 5 minutes, first reclining, then sitting, then standing. Pulse and pressure are then taken again in the reclining position, every minute for 5 minutes, following which the hand opposite the side on which the blood pressure is taken is placed in ice water (4–5°C.) up to the wrist for exactly 1 minute. Pulse and blood pressure readings are taken again every minute for 5 minutes. The patient then assumes a standing position, and the cold test is repeated in the upright position exactly as before. A sharp rise in blood pressure on exposure to cold is indicative of elasticity of the vascular bed and tends to predict a satisfactory result following sympathectomy if other conditions are favorable.

A sedation test is performed as follows: After a light supper the patient is given 3 grains of sodium amytal by mouth at 7:00, 8:00 and 9:00 p.m. (a total of 9 grains). Hourly blood pressure and pulse readings are charted throughout the night from 7:00 p.m. to 7:00 a.m., with a note at each reading as to whether the patient is asleep, drowsy or awake.

OPERATIVE TECHNIC

Several operative technics have been devised, all aimed at removal of the sympathetic chain, and splanchnic nerves beginning at any point from the 3rd to the 6th thoracic segment and extending down through the first or second lumbar segment. The Smithwick approach is used more often than any other with variations in the rib or ribs which are removed. In 1946 Hinton and Lord[7] described a new incision which we believe gives somewhat better exposure of the ganglionated chain, and while I have used both types of incision lately I prefer the Hinton method. Both technics are summarized below.

Smithwick approach.—Under gas-oxygen-ether intratracheal anesthesia a vertical incision is made 3 inches lateral to the midline from the ninth rib downwards and laterally to the crest of the ilium at the posterior axillary line. The latissimus dorsi muscle is divided, the sacrospinalis muscle retracted medially, and segments of the eleventh and twelfth ribs removed. The pleura is carefully dissected from the inner chest wall and the endothoracic fascia. The sympathetic chain is picked up as it lies against the bodies of the vertebrae and is dissected downwards, with division of the communicating rami to the diaphragm and removal of the seventh to the twelfth ganglia inclusive. Corresponding segments of splanchnic nerves are removed. The diaphragm is then divided below the twelfth rib and the chain followed downward with removal of the first lumbar or the first and second lumbar ganglia. The splanchnic nerves are divided just above the celiac plexus. The wound is closed in layers with silk.

Hinton approach.—With the patient in the lateral decubitus position the entire ninth rib is removed with the lateral portion of its costal cartilage. The pleura is then dissected from the inner chest wall after dividing the intercostal muscles and the endothoracic fascia. A rib spreader is placed between the eighth and tenth ribs. The pleura is opened anteriorly as the spreader is separated. The pleura is freed from the diaphragm. The sympathetic chain and splanchnic nerves are carefully dissected from the posterior chest wall down to the diaphragm dividing communicating rami. The diaphragm is then incised entirely around its lateral circumference and the sympathetic chain followed down beyond the first or second ganglion and divided. The splanchnic nerves are divided just above the celiac ganglion. The wound is closed with silk.

REPORT OF CASES

Case 1.—A 50-year-old white male was admitted to the hospital on August 17, 1946, complaining of recurrent chest pain diagnosed as angina pectoris of approximately 1 year's duration. He had been taking nitroglycerin with some benefit and admitted to the intake of 1 pint of whiskey daily during the preceding year. He had had recurring bouts of frontal headache and several attacks of mental confusion, diagnosed as encephalopathy.

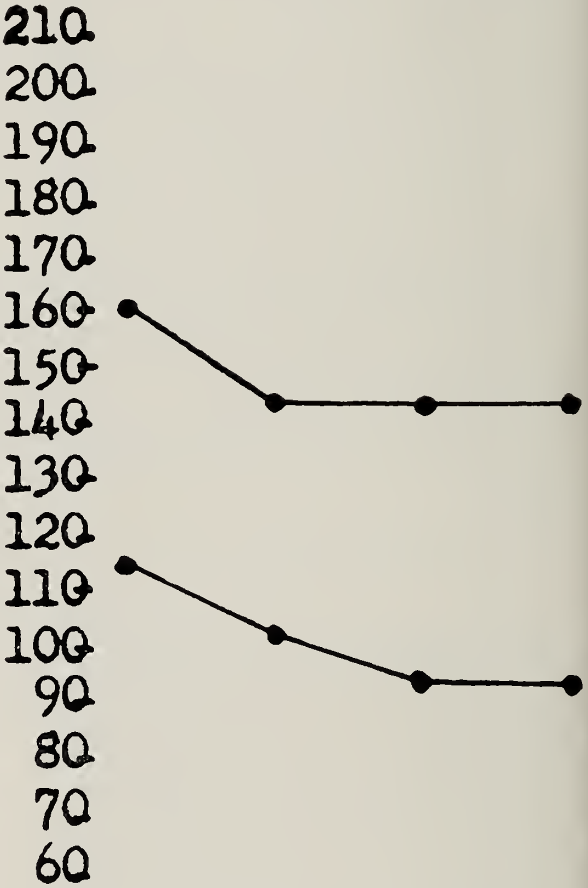

FIG. 1. Case 1. Preoperative sodium amytal test.

On admission he was found to be a rather stocky man of ruddy complexion with a blood pressure of 200 systolic and 125 diastolic. He stated that he had not been aware that he had hypertension until about the time of admission. There was a slight tremor of the extended hands. The retinal arteries were moderately tortuous, but there was no nicking of the vessels, and no hemorrhages or exudates were seen. The remainder of the physical examination was not remarkable. Laboratory studies revealed urinary specific gravity as high as 1.024 to 1.030. Microscopic study of the sediment showed many white blood cells. The blood picture was normal. The nonprotein nitrogen was 28.5 mg. per cent. Phenolsulfonphthalein excretion was recorded as 20 per cent at the end of the first hour. An electrocardiogram revealed left ventricular strain. The heart was moderately enlarged by X-ray examination, but the lung fields were clear.

On sedation with sodium amytal there was only a fair response, in that the systolic pressure fell from 160 to 145 mm. and diastolic from 115 to 95 mm. Hg (fig. 1).

This patient was regarded as only a fair candidate for a lumbodorsal sympathectomy, but because of his anginal syndrome it was decided to perform the operation despite his age and somewhat diminished renal function. The procedure was undertaken in 2 stages by the Smithwick approach on December 5 and December 21 respectively. The second stage was followed by atelectasis of the left lung which responded to bronchoscopy. His postoperative result is shown in figure 2. Following operation he had no headache and continued to have a fairly satisfactory lowering of his blood pressure levels. In April, 1947 his reclining blood pressure was 140/82 and the standing pressure, 100/78. In September, 1947 he died suddenly as a result of coronary thrombosis.

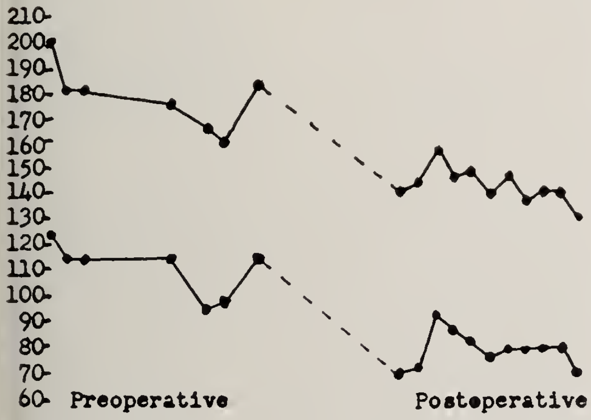

FIG. 2. Case 1. Preoperative and postoperative blood pressures.

The effect of operation upon the blood pressure in this case was felt to be as good as could be expected in a man of his age and to be consistent with the result of his sodium amytal sedation test.

Case 2.—A 37-year-old white male was admitted to the hospital on October 3, 1946 because of essential hypertension. He had first learned of elevated blood pressure upon his discharge from the Army in February, 1945 when he was required to spend a week at Fort Dix Hospital for study. He had no complaints or symptoms until he was examined for employment in March, 1946 when he was eliminated because of hypertension of 186/116 mm. Hg. Except for occasional intermittent dizziness for the 6 months prior to admission he had had no other symptoms. He had been taking phenobarbital 3 times daily. At rest his admission pressure was 160/105 mm. Hg. The remainder of his physical examination revealed a well developed young man with a heart of normal size. The pulse rate was 88. The reflexes were normal. An X-ray film of the chest showed no cardiac enlargement. Intravenous pyelogram, repeated urinalyses, and complete blood examination were all within normal limits. Phenolsulfonphthalein output was 25 per cent in the first 15 minutes. The sodium amytal test showed a fall of blood pressure from 165/100 mm. to 118/78 mm. Hg, an excellent response (fig. 3). On November 25, 1946 a first stage lumbodorsal sympathectomy was performed followed a short time later by the second stage. There was slight drainage from the wound following the first stage which quickly subsided. Postoperatively (fig. 4) his pressure averaged 120 systolic and 75 diastolic with a considerably lower level when he was in a standing position (fig. 4). This man is now serving in the Government in Germany and when last seen had no symptoms and was regarded as a good result.

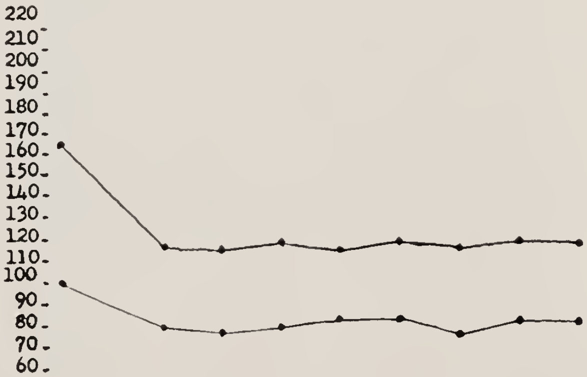

FIG. 3. Case 2. Preoperative sodium amytal test.

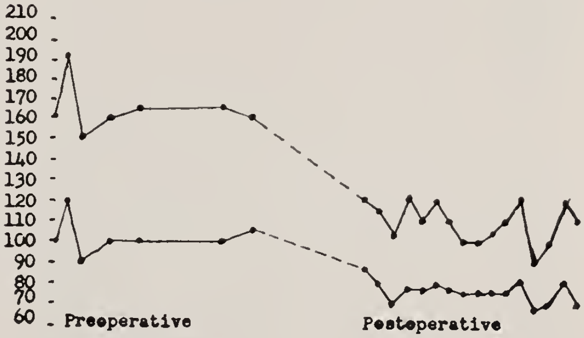

FIG. 4. Case 2. Preoperative and postoperative blood pressures.

Case 3.—A 38-year-old white female was admitted to the hospital on December 22, 1946. She stated that approximately 2 years before that time she had had headaches, nausea and vomiting relieved by a sudden hemorrhage from a duodenal ulcer. Following the hemorrhage she was free from symptoms for 2 or 3 months, when the headaches gradually began to return. After July, 1945 they became much more severe. She was given a disability discharge from the Army on November 17, 1945, after which she continued to have attacks of headache and dizziness every few weeks, especially at night. She had also been troubled by nausea and vomiting, occasional palpitation, and a feeling of fullness in the left side of the chest. Except for an appendectomy and salpingo-oöphorectomy her past history had not been remarkable. Physical examination on admission revealed the blood pressure to be 180/140 mm. Hg; it varied thereafter from 206/160 to 150/100. The heart was slightly enlarged to percussion, the left border of dullness being just outside the mid-clavicular line. There were frequent extrasystoles. Two lower abdominal scars were well healed. Electrocardiograms revealed premature ventricular contractions with left axis deviation. Blood nonprotein nitrogen and urinalyses were all within normal limits except for occasional findings of a trace of albumin in the urine. Fundus examination of the eyes was normal. Phenolsulfonphthalein output was 60 per cent in the first 15 minutes. Since she seemed to be an excellent candidate for a lumbodorsal sympathectomy, the 2-stage operation was performed on January 28 and February 12 respectively. She had an excellent postoperative fall in blood pressure corresponding with her response to the sedation test (figs. 5 and 6). She is now symptom-free, her latest blood pressure reading having been recorded as 120/82.

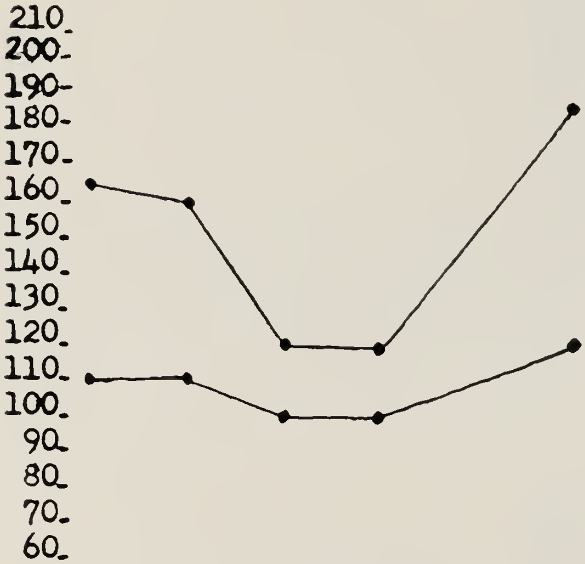

FIG. 5. Case 3. Preoperative sodium amytal test.

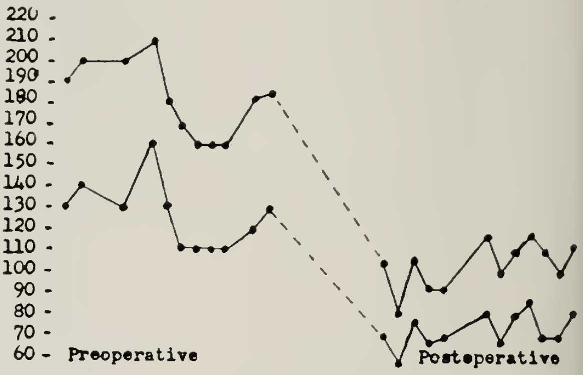

FIG. 6. Case 3. Preoperative and postoperative blood pressures.

Case 4.—A 33-year-old colored veteran was admitted to the hospital on March 19, 1947 because of headache, bilateral ocular pain and high blood pressure of $2\frac{1}{2}$ years' duration, and recurring ankle edema of 2 years' duration. Headaches had begun while he was on service in the Southwest Pacific theater of war, and at the time of his separation from the Army in October, 1945 he was discovered to have high blood pressure. At about the same time he first noticed mild exertional dyspnea. There had been no encephalopathy, vomiting or anginal attacks. Physical examination on admission revealed the blood pressure to be 195/130 mm. Hg. The liver edge was palpable 2 cm. below the costal margin, and there was slight cardiac enlargement. Albuminuria varied from 1 to 3 plus. Phenolsulfonphthalein output was 15 per cent in the first 15 minutes, and 40 per cent at the end of 2 hours. There was moderate cardiac enlargement by X-ray examination. Under sodium amytal the blood pressure fell from 200/135 to 165/122 mm. Hg, only a fair result. The cold pressor test produced a rise in pressure from 180/130 to 185/130 mm. Hg, a poor result. On May 2, 1947 and May 16, 1947 a 2-stage lumbodorsal sympathectomy was performed by the Hinton approach. There were no complications. Postoperative blood pressures averaged 140 systolic over 100 to 105 diastolic. He was entirely symptom-free and remained so until October 1947, when he began to complain again of mild frontal headache, especially at night. These have not become more severe and are always relieved by assuming a standing position. His blood pressure on October 9, 1947 was 168/100 mm. Hg.

This man has had as fair a result of operation as could be predicted from his sedation and cold pressor tests and from the evidence of renal damage.

Case 5.—A 55-year-old Greek-American was admitted to the hospital on March 25, 1947 because of recurrence of a Kaposi hemorrhagic sarcoma of the left foot. He had had several similar tumors removed from the same and the right foot on previous occasions. It was discovered that he had had hypertension since 1941, when his pressure was found to be 200 systolic, the diastolic being unknown. He had been troubled by dizziness, recurring headaches, and failing vision. The blood pressure on admission to the hospital was 195/112 mm. Hg and varied thereafter from 190/110 to 240/140 mm. Hg. On March 28, 1947 the Kaposi tumor was removed from his foot, after which it was decided to study his case more thoroughly to determine the advisability of performing a lumbodorsal sympathectomy. General examination was not remarkable, except for slight enlargement of the heart confirmed by a 7 foot X-ray film of the chest. Blood studies revealed a red blood cell count of 4.5 million and a white blood cell count of 8,200, with a normal differential. Phenolsulfonphthalein output was 25 per cent in the first 15 minutes and 42.5 per cent 2 hours after injection of the dye. There were grade III eyeground changes with generalized narrowing of the retinal arteries and slight retinal edema. Under sodium amytal there was a fall in pressure from 240/140 to 140/102 and in the cold pressor test a rise in pressure from 186/124 to 232/130 mm. Hg. In spite of the man's age it was decided that his good general condition and evidence of elasticity of the vascular system warranted a lumbodorsal sympathectomy. Therefore the 2-stage operation was performed on April 28 and May 9, 1947. The first side was operated on by the Smithwick approach and the second by the Hinton method. Postoperatively he developed a wound hematoma which became infected and continued to drain for several weeks, until on July 22 it was found to communicate with the retropleural space, which was opened widely and healed satisfactorily. He had an excellent postoperative lowering of his blood pressure and relief of symptoms. On October 1, 1947 he was examined and found to be in excellent condition. The wound was practically healed. He was symptom-free and had gained 10 pounds in weight. The blood pressure was recorded as 140/95 mm. Hg.

This man, in spite of his advanced age, had a satisfactory result following operation, which corresponded fairly closely with the fall in pressure during his sedation test. This occurred in spite of the fact that his was a type III case, his pulse pressure being more than 20 mm. Hg than half the diastolic pressure.

CONCLUSIONS

It is felt that these 5 cases of lumbodorsal sympathectomy, while too small a number to be of any real significance, nevertheless illustrate that postoperative results can often be predicted by preoperative studies. A thorough history, physical examination and laboratory tests must be carried out to detect contraindications to operation. Most important in determining operability is the condition of blood vessels, heart and kidneys, the most significant of which is the state of the kidneys. Women in general, other factors being equal, have better results than men, and patients with low pulse pressure fare better than those in whom it is high. No individual in congestive heart failure or with sufficient kidney damage to cause an elevation of nonprotein nitrogen in the blood should be subjected to this procedure.

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SURGICAL TREATMENT OF CARCINOMA OF THE HEAD OF THE PANCREAS AND OF THE THYROID

Report of a Case

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BECAUSE of the excellent pioneer work of Halsted,[1] and Whipple, Parsons and Mullins[2] in devising surgical procedures to be used in the successful radical resection of malignant lesions in the region of the head of the pancreas, it has been possible to offer patients with such lesions more than palliative surgical relief.

Cattell,[3] Trimble and co-workers,[4] Pearse,[5] Brunschwig,[6] Waugh and Clagett[7] and others have, by their notable work, added greatly to the solution of the surgical problems in this field.

Prior to January 1, 1946, radical partial pancreatectomy was done in 27 cases at the Mayo Clinic for carcinoma of the head of the pancreas and ampulla or papilla of Vater with a hospital mortality rate of 18.5 per cent (table 1). Of the number who survived the operation, 3 out of 14 patients who had carcinoma of the head of the pancreas and 5 of the 8 who had ampullary malignant lesions were living without evident recurrence.

TABLE 1

Survival of Patients after Radical Partial Pancreatectomy

SITE OF LESION	PATIENTS	HOSPITAL DEATHS		DEATHS DUE TO RECURRENCE	PATIENTS LIVING	
		Number	Per cent		Number	Per cent
Head of pancreas	16	2	12.5	11	3	18.8
Ampulla or papilla of Vater	11	3	27.3	3	5	45.5
Total	27	5	18.5	14	8	29.6

It is apparent that the results after radical resection for carcinoma of the ampulla are a great deal more encouraging than are those after radical resection for lesions of the head of the pancreas, but such a procedure is, I believe, indicated and justified in all such patients if the operative risk be reasonable.

Of the adenomatous goiters removed at operation each year at the Mayo Clinic approximately 4 per cent are found to be malignant. In 60 per cent of the surgical cases malignancy of the tumor is not suspected before operation. An analysis of the grade of malignancy in 496 cases by Pemberton[8] showed 68 per cent to be of low grade (grade 1 or 2 on a basis of 1 to 4 in which 1 represents the least, and 4 the most malignant condition). The outlook after thyroidectomy and irradiation was noted by him to be most favorable in grade 1 papillary adenocarcinoma, the malignant nature of which is not suspected clinically. The hospital mortality rate for all patients with carcinoma who underwent partial thyroidectomy was less than 2 per cent.

The following case is one in which both a carcinoma of the head of the pancreas and a papillary carcinoma of the thyroid were radically removed.

REPORT OF CASE

The patient, a practicing physician aged 54 years, first registered at the Clinic, June 26, 1945, with a complaint of upper abdominal pain and jaundice. One month previously he first had complained of periodic attacks of sudden colicky epigastric pain extending through to the right scapular region and lasting 15 to 20 minutes. At that time he noted intermittent darkness of the urine and some lightness of color of the stool. Several weeks after the onset and following an attack of pain, an icteric tinge to the sclerae and acholic stools were noted. Since then the jaundice had been progressive with some fluctuation noted in the color of the stool. The attacks of abdominal pain had been almost continuous for the 2 weeks preceding registration. There had been a loss of 20 pounds (9.1 kg.).

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Examination revealed a thin, jaundiced (grade 2), middle-aged white man. The blood pressure was 110 mm. Hg systolic and 80 mm. Hg diastolic. The pulse rate was 80 beats per minute and the temperature was 98°F. A single adenoma 3 by 3 cm. was present in the left lobe of the thyroid. A distended gallbladder was palpable by abdominal examination. No tenderness or other palpable masses were noted.

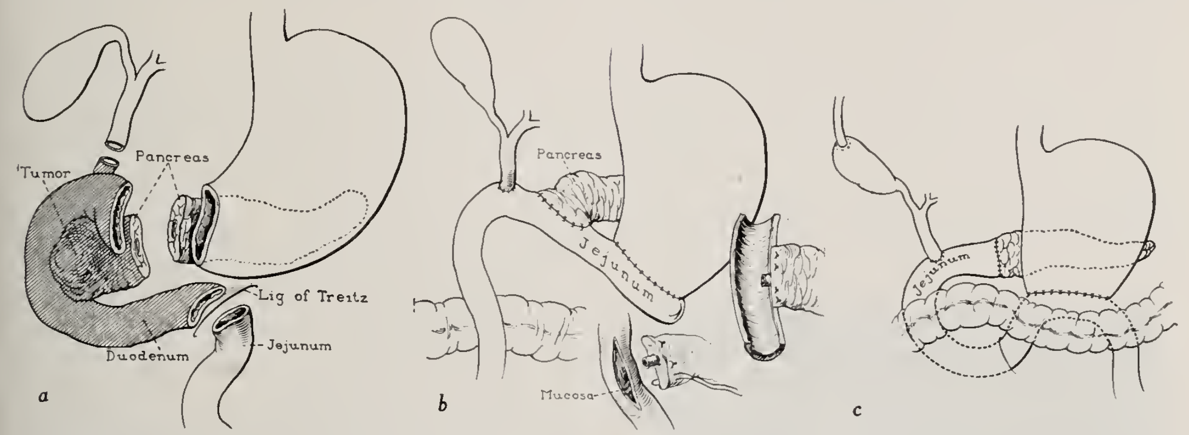

FIG. 1. Radical resection of the head of the pancreas. (a) Parts removed. (b) Technic of anastomosis used in reported case. (c) Technic advised by Waugh.[7]

Urinalysis gave negative results. The hemoglobin measured 15.5 Gm. per 100 c.c. of blood, and the leukocytes numbered 6,500 per cubic millimeter of blood. Roentgenograms of the chest and of the kidney, ureters and bladder revealed no abnormality. The value for serum bilirubin was 24.6 mg. per 100 c.c., direct, and 1.0 mg., indirect. Duodenal drainage on July 7, 1945, showed a trace of bile but no blood; on July 8, 1945, it was negative for bile. The sedimentation rate of the erythrocytes was 19 mm. in 1 hour, and the prothrombin time was 20 seconds. The basal metabolic rate was −13 per cent. The value for serum amylase was 106 units.

The diagnoses of adenomatous goiter without hyperthyroidism and of obstructive jaundice, probably due to stone in the common duct or to carcinoma of the head of the pancreas, were made, and after suitable preparation (vitamin K) abdominal exploration was performed on July 9, 1945.

The gallbladder was found to be markedly dilated and no stones were palpable. The common duct was enlarged (grade 3) and in the head of the pancreas it was possible to feel a hard indurated mass which was thought to be malignant. The mass was freely movable, the remainder of the pancreas was normal, and there was no evidence of distant metastasis. Therefore, radical resection of the head of the pancreas was done, with removal of the pyloric portion of the stomach, the entire duodenum and the distal portion of the common duct (fig. 1). The end of the jejunum was closed and the gastrointestinal continuity was reëstablished as shown in figure 1b.

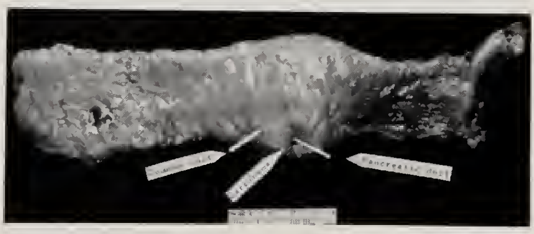

FIG. 2. Duodenum showing location of carcinoma.

The surgical pathologist reported the specimen (fig. 2) to be a grade 2 scirrhous adenocarcinoma 1 cm. in diameter, involving the head of the pancreas. At the opening of the dilated pancreatic duct the duodenum showed a 4 mm. area of ulceration. The common duct was dilated proximally as a result of obstruction 1 cm. above its termination. The nodes were inflammatory.

The patient's convalescence was quite uneventful except for the presence of persistent bile-stained drainage from a stab wound made to the right of the incision. He was dismissed from the Clinic with instructions to take a high vitamin, high protein (140 Gm.) diet with a fat content of 80 Gm. daily. At that time there was minimal drainage noted.

On February 14, 1946, the patient returned to the Clinic for a check-up. He had been feeling well, was enjoying a good appetite and had gained 20 pounds (9.1 kg.). There was still some bile-stained drainage from the abdominal stab wound (0.5 to 3 ounces [15 to 90 c.c.]

daily). He had noted no abdominal pain or jaundice and had 1 well-formed stool daily.

Urinalysis gave negative results. The value for hemoglobin was 13.6 Gm. per 100 c.c. of blood, and there were 8,500 erythrocytes per cubic mm. of blood. The blood sugar measured 86 mg. per 100 c.c. of blood. The value for serum bilirubin was 0 mg. per 100 c.c., direct, and 0.3 mg., indirect. The value for serum protein was 6.7 Gm. per 100 c.c.; the albumin-globulin ratio was 1.5:1; amylase measured 64 units, and the test for lipase gave negative results. The value for urea in the blood was 24 mg. per 100 c.c.; for cholesterol, 240 mg. per 100 c.c. of plasma; for cholesterol esters, 153 mg. per 100 c.c.; for phospholipids, 255 mg. per 100 c.c.; for fatty acids, 332 mg. per 100 c.c., and for total lipoids, 572 mg. per 100 c.c. The test for liver function showed no dye retention.

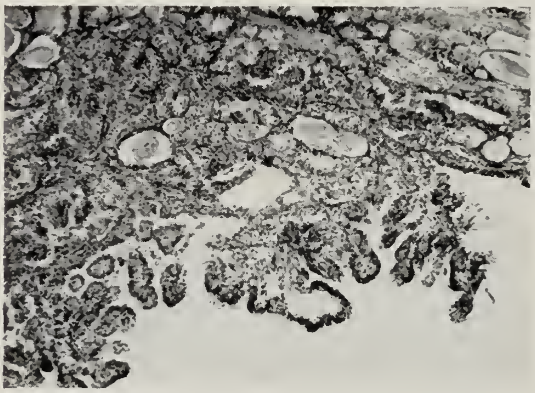

FIG. 3. Papillary adenocarcinoma, grade 1, of the thyroid (hematoxylin and eosin × 65).

The patient was studied by consultants in the metabolic unit and was found to lose only little excess food in the stool; small doses of pancreatin were prescribed.

On February 21, 1946, partial thyroidectomy was done for the adenomatous goiter. An adenoma 3 cm. in diameter was removed from the left lobe and reported to be a grade 1 papillary adenocarcinoma (fig. 3). Therefore, total left lobectomy was done. The right lobe was normal and was not disturbed. The convalescence was uneventful, and the patient was dismissed on March 15, 1946.

One year later, March 11, 1947, the patient was again seen at the Clinic and was found to have maintained the weight previously gained. The bile-stained drainage had increased in amount, and he had experienced an attack of fever and chills. Physical examination and laboratory tests gave negative results. It was advised that the fistula be closed. The patient was dismissed to return in 3 months for operation.

On June 6, 1947, surgical exploration was carried out. The fistula was found to be at the site of the choledochojejunostomy. A rubber catheter was placed in the anastomotic lumen, and the anterior wall, from which the fistula arose, was closed. In order to relieve pressure at the site of anastomosis, as suggested by Waugh, a catheter cholecystostomy was done. No evidence of recurrence of the previously removed malignant lesion was found.

The cholecystostomy tube was removed on the tenth postoperative day, and suction was applied to the wound. There had been no drainage since the fourteenth postoperative day, and the patient was dismissed from the Clinic on the twenty-first postoperative day.

I believe the technical procedure advised by Waugh (fig. 1c) is superior to the one which was used in this case. With such, the gastrojejunal stoma is placed distal to the newly established entrance of the pancreatic and common ducts, thus avoiding passage of gastric contents by these sites of anastomosis which are, therefore, placed at rest. The performance of cholecystostomy, as suggested by Waugh, temporarily relieves pressure on the choledochojejunal stoma.

In a second patient in whom radical resection was more recently performed for carcinoma of the ampulla, this procedure was followed. The patient was dismissed from the hospital on the fourteenth postoperative day after an entirely uneventful convalescence.

The patient in the case herein reported is in excellent health, with good digestive function and without any evidence of recurrence 2 years after successful radical resection of a grade 2 adenocarcinoma of the head of the pancreas and 16 months after total left lobectomy for a papillary adenocarcinoma of the thyroid.

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(*Continued on page 255*)

THE USE OF PENICILLIN IN WEIL'S DISEASE

Report of Two Cases

JAMES M. MOSER, Jr., M.D.

Captain, Medical Corps, Army of the United States

THERE have been a few reported cases of the effect of penicillin in Weil's disease.[1,2,3] One of the cases in this report occurred in the District of Columbia; the other case followed exposure to rats in Emporium, Pennsylvania. Larsen of the National Institute of Health, in a survey during the period 1942–1945, found that 30 per cent of the rats in the District of Columbia were infected with Weil's disease. During this same period there were 14 human cases of Weil's disease reported to him from the District of Columbia. The cases in this report demonstrate that penicillin is indeed very effective against this leptospiral infection. Convalescent serum was not used in either of the cases.

Report of Cases

Case 1.—A 30-year-old white man was admitted to the hospital on August 26, 1946, complaining of chills, fever, and headache. His illness began the day before with mild headache, generalized aches and pains, and anorexia. On the day of admission he felt much worse, had more severe leg and back pains, and suffered with a very severe headache. On this day he began to have severe shaking chills with a fever of 103–104°F. He had no diarrhea or vomiting.

During the 2 to 3 weeks before admission he had been canoeing a great deal in the vicinity of Alexandria on the Potomac River. He states that he did not swim in this area but did swim in an area up above Key Bridge in the Potomac River. He recalled that approximately 10 days prior to admission during a grueling canoe race in very rough water in the vicinity of Alexandria he was considerably soaked with spray. There was no history of any rats in the patient's home.

The patient was a well developed, well nourished man appearing acutely ill, with a temperature of 101°F. and a pulse rate of 100. There was a very definite injection of the conjunctivae and sclerae and definite tenderness to pressure in his calf, thigh, and lumbar muscles. Laboratory work on admission revealed a leukopenia with a normal differential, a normal red blood cell count, and a negative urinalysis.

The impression on admission was that the patient had influenza, but after 48 hours of routine care he was still having 4 to 5 severe shaking chills every day and was complaining of a very severe headache. On August 29 a unrinalysis showed 4 to 6 red blood cells per high power field, 2-plus albumin, and a positive test for urobilinogen in 1–100 dilution. Smears for malaria were done daily for the first 4 days of hospitalization and were negative. Penicillin therapy was begun on the "hunch" that the man had a spirochetal infection. The course of therapy was 50,000 units of penicillin given intramuscularly every 2 hours for 12 doses, then reduced to every 3 hours. Almost immediately after the second injection of penicillin his temperature went up to 104°F. He had a 30-minute episode of vomiting and asthmatic breathing with an exacerbation of severe headache. These symptoms cleared up in an hour, his temperature became normal, and he felt greatly improved. The icterus index on August 31 was 24 units. Urinalysis on the same day showed markedly positive urobilinogen and bile content. He became clinically jaundiced on this day. His Wassermann and Kahn tests were negative. On September 3 he showed an icterus index of 75 units and a quantitative bilirubin of 9.22 mg. per cent; on September 9 he showed a quantitative bilirubin of 5.4 mg. per cent; and on September 12 the icterus index was 20 with a quantitative bilirubin of 2.3 mg. per cent. He remained clinically jaundiced until September 15. On September 3, 5 days after the onset of his illness, an agglutination for Weil's disease was negative. A repeated agglutination test made on September 17 revealed a positive agglutination with Leptospira icterohemorrhagiae in dilutions up to 1–10,000.*

The patient showed a rather definite clinical response to the penicillin therapy. He was discharged, October 20, 1946, on a high carbohydrate, high protein, high vitamin diet with a warning to abstain from alcohol for at least a year. He suffered from chronic fatigue and frequent headaches for 5 or 6 months following his discharge from the hospital. At the end of this time he lost his sense of fatigue and headaches and felt as well as he had ever felt in his life. Penicillin therapy was discontinued on September 7, after 10 days of its use. A total of 2,760,000 units was given.

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* Macroscopic slide test using the Lederle kit.

Case 2.—A 27-year-old man was admitted to the hospital on September 3, 1947, complaining of severe headache, chills, and fever. Five days before admission he returned from a 3 weeks' camping trip with his whole family in Sizerville State Park, Cameron County, Pennsylvania. During this time he saw no ticks, no dead rats, and he did not handle any dead animals. He spent 3 days in his grandmother's house in Emporium, a nearby town, and he saw many rats there. The food he ate was what they had carried with them, the water he drank was from a community water supply, and he swam a great deal in a community swimming pool. He sustained numerous abrasions from the concrete on the swimming pool. He saw many chipmunks and squirrels in the area. The day before admission he had generalized aches and pains in both knees, a slightly sore throat, and a severe headache. On this day he had 3 or 4 severe shaking chills. He was seen in the outpatient department the night before admission with a temperature of 102°F. and was advised to enter the hospital. He refused hospitalization and was given sulfadiazine and went home. He became progressively worse that night with more chills, weakness, severe headache, and generalized aches and pains. The next morning he was admitted to the hospital.

He stated that he had had 3 episodes somewhat like the present one while in North Africa in 1944. These were treated with sulfadiazine and never lasted more than 3 or 4 days. They were characterized by very sore throat and fever.

His brother, who was on the same camping trip, became sick with a fever and headache 2 days prior to the onset of the patient's illness, and about 3 days after the patient's onset his sister became ill with fever and headache. The illnesses of his siblings did not last more than 2 or 3 days. Nobody else in the family became sick, and most of them used the swimming pool.

The patient was well developed and well nourished. He did not appear acutely ill but was sweating a great deal and complaining of a severe headache. Physical examination was negative. The blood pressure was 118/76, the pulse rate 90, and the temperature 103°F. There were no petechiae, and the liver and spleen were not palpable. He had mild injection of the pharynx with mild tonsillar swelling plus a moderately severe scleral and conjunctival injection. The patient was examined thoroughly for evidence of muscle tenderness, and none could be found.

Laboratory work on admission showed 3 to 5 granular casts per high power field in the urine and a negative blood smear for malaria and trypanosomiasis. The blood count showed 10,600 white cells with 91 per cent segmented forms and 9 per cent lymphocytes. The hemoglobin was 14 Gm. by the Sahli method.

On the day of admission the patient experienced numerous shaking chills, with the temperature reaching 103.4°F. and a corresponding pulse of 104 per minute. He complained of a progressive severe headache and looked quite ill. Because he seemed so weak, and even though the diagnosis had not been made, it was felt that a 48-hour trial of sulfadiazine was justified. The following day he complained of soreness and stiffness of his neck with the ever-present headache. A spinal tap on the second day showed a normal spinal fluid. On the morning of September 5, 2 days after admission, he said he was feeling better. His temperature was 102°F. with a pulse rate of 104 per minute. His blood pressure was 96/70 mm. Hg. He showed a more severe bilateral conjunctivitis and he demonstrated some tenderness in his left upper quadrant. An electrocardiogram taken at this time revealed low T waves in Lead 2, inverted T waves in Lead 3, and low T waves in Lead 4, with moderate left axis deviation. On the afternoon of the same day the patient experienced a severe chill with the temperature rising to 104°F. and a pulse rate staying around 106 per minute. It was felt that sulfadiazine had been given an adequate trial and that penicillin should be substituted for sulfadiazine. He still showed no evidence of any petechiae anywhere. He was started on 50,000 units of penicillin G every 2 hours for 12 doses, followed by penicillin G, 50,000 units every 3 hours. About 2 hours after penicillin was started the patient suffered the worst chill he had had; he vomited continually for a half hour, and his headache became even more severe, requiring demerol for relief. After this episode he claimed he felt much better. His blood pressure at this time was 96/60 mm. Hg. He still showed no evidence of any petechiae. On September 6 he felt markedly improved. His temperature showed a maximum rise of 100°F. on that day, and his appetite returned. On September 7, 5 days after admission, it was noted that he had marked hemorrhages in his sclerae with definite icterus. At this time an agglutination test for Weil's disease was reported as negative, as was a Widal for typhoid. Repeated daily urinalyses done for urobilinogen and bile showed a normal amount of urobilinogen and a trace of bile. His quantitative plasma bilirubin showed 0.44 mg. per 100 c.c., which was normal for that laboratory. His temperature remained flat for the rest of his convalescence, and his headache disappeared on September 9, 6 days after admission. The icterus of his sclerae was noticeable for only 3 days; his liver never became palpable; and his total proteins with A/G ratio, thymol turbidity, and cephalin flocculation tests were all normal. X-ray films of the chest on 3 different occasions showed nothing abnormal. The agglutination test for Weil's disease was repeated on September 15 and was positive for *L. icterohemorrhagiae* in 1:1000 dilution.* An electrocardiagram at this time showed marked improvement in all T waves, a finding which may have meant that myocardial involvement apparently existed during the height of his infection. Blood from 1 sibling who had mild clinical symptoms was positive in 1:30,000 dilution for Weil's disease.* This patient's total dosage of penicillin G was 2,520,000 units.

The patient was discharged from the hospital, September 30, 1947.

COMMENT

These 2 cases of Weil's disease suggest that penicillin is very effective if given during the bacteremic phase. It is true that there is no way of making the diagnosis except by finding the leptospirae in blood smears during the first week. This is difficult for the ordinary laboratory technician. If the physician withholds therapy until after the diagnosis has been made the effectiveness of penicillin becomes progressively diminished and the disease may be fatal. The reason that penicillin loses its effectiveness after the onset of jaundice or nephritis is perhaps that the spirochetes take up residence in all the organs of the body and high therapeutic concentrations of penicillin cannot reach them. The ideal method of handling the cases is to have a qualified technician examine the peripheral blood for the organisms during the bacteremic phase, when the diagnosis will be made in plenty of time to make therapy with penicillin effective. Massive doses of penicillin in the first 24 hours, as was used in these cases, are indicated. I do not know of any work in which the sensitivity of the leptospirae has been actually tested by cultural methods. If this were possible we would know exactly how much penicillin would be required in the individual case. Recovery from the blood of the leptospirae by ordinary cultural methods is very difficult.

The reasons why I believe that penicillin produced a clinical cure in these cases are (1) the definite improvement in the temperature curve within 24 hours after the beginning of penicillin therapy, (2) the moderate Herxheimer reactions which the patients demonstrated after their second injection of penicillin, and (3) the marked general clinical improvement that they recognized by saying that they felt 100 per cent better when they had felt that they were going to die. It might be a good idea when treating Weil's disease in the septicemic phase to start with a small concentration of penicillin and work up to 50,000 units every 2 hours within 6 injections. In this way severe reactions to this antibiotic might be avoided.

It is interesting to note the relatively slow pulse rate in both cases during the febrile phase of the disease. The electrocardiogram made in the second case showed probable evidence of myocardial injury which may or may not have been significant.

The failure of complete clinical recovery in the first case as manifested by fatigability and headaches suggests the existence of a low-grade hepatitis which took 6 months of good diet to clear up. It is regretted that liver function tests were not performed in the first case during his hospitalization and for the 6 months after his discharge.

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* Microscopic method of Gardner from *Lancet*, January 4, 1947.

President's Page

CHEST X-RAY SURVEY

The Washington Chest X-Ray Survey, which began on January 15 and will end on June 15, is making fine progress. As this is written, approximately three hundred thousand individuals have been X-rayed. About one and one half per cent of the persons X-rayed have been found to have tuberculosis, 80 per cent of them hitherto unreported. This work is certainly important to those individuals who are found to be diseased, and even more so to the remainder of the population.

The routine which has been followed in this survey is briefly as follows: a 70 mm. survey or microfilm is made by one of the portable X-ray units. This is reported positive or negative, positive meaning that suspicious shadows are present on the film, in which case the patient is requested by letter to report to the Weightman School Clinic, 23rd and M Street, N.W., where a 14 by 17″ X-ray film is made. On the basis of this film, many cases previously reported merely positive are eliminated as being non-tuberculous or as being obviously healed scars. Certain ones will be found to have evidence of disease other than tuberculosis, and, of course, the remainder will show evidence of clinical tuberculosis. These latter patients, together with those revealing evidence of non-tuberculous chest pathology, are sent a second letter informing them that they have tuberculous or non-tuberculous chest lesions and that further medical attention is indicated. They are requested to report to the Tuberculosis Clinic of the Health Department for advice.

It is at this point in the program that some difficulty has arisen. Patients, alarmed by the letter requesting them to report at the Clinic, have taken the matter up with their private physicians. These, in turn, not understanding the reason for the requested visit, have, on occasion, been critical of the Survey. The sole purpose of the visit to the Tuberculosis Clinic is to enable the Survey to complete its records. There is no intent on the part of the physicians operating this Clinic to cause any embarrassment or to place any patient under treatment against his will. Each patient responding to the letter is advised of his diagnosis and urged to return to his private physician if he has one. If he has not, he is urged to call the MEDICAL BUREAU for information regarding private physicians who treat his particular type of illness.

Histories of the patients reporting to the Clinic, the X-ray reports, and the X-ray films themselves are available on request by any private physician treating a patient who has participated in the Survey. In order to ease the pressure of work, requests for such information or X-ray films should be made in writing to Dr. A. Barklie Coulter, Tuberculosis Clinic, Health Department, 300 Indiana Avenue, N.W., Washington, D. C.

Our Society endorsed this chest X-ray survey at its beginning, realizing that it would serve the community well. By continued and close coöperation, physicians can render an important service to their community, to their patients, and to themselves.

Raymond T. Holden

Editorials

THE CLERGYMAN LOOKS AT THE PHYSICIAN*

If the minister of the Gospel is honest, he will confess that he looks at the physician with envy and with something akin to an inferiority complex. The regularly ordained minister has spent at least seven years in study and training for his vocation, and although his training may not be as intense or as strictly specialized, this need not set up within him the inferiority complex from which he may suffer.

To confess even to himself this feeling of inferiority may be an admission of his own failure to continue his studies after leaving the seminary or graduate school. The physician, on the other hand, is always receptive to the advances made by medical science. He is eager to learn of new drugs, new treatments, new methods, new technics. The minister, it must be confessed, is not always as receptive to progress, to new ideas, new revelations, and new insights.

But I believe the origin of an inferiority complex, if such there be, lies in our natural human desire to see results. Here is where the clergyman envies the doctor. How many times have we clergymen envied the joy that must come to the physician who has the satisfaction of seeing things happen. He can save lives, and although he realizes that he has been but the agent to liberate the recuperative forces which providence has provided, nevertheless he knows that there are people going about their work today who, but for what he did, might not be alive. He can relieve pain. What greater satisfaction could a man have than to know that he was able to do something to take away a physical agony and to relieve suffering? To the physician, as to the carpenter, the shipbuilder, the artist, the gardener, is given the thrill and the delight of seeing results. To the minister, results are not as quickly evident. But things do happen. Lives are changed. Prayers are answered. We sometimes have longer to wait. No wonder we envy the physician.

We covet, too, the air of authority with which the M.D. speaks, even though we know that he knows his limitations. We honor the doctor who is wise enough to say in certain fields and with regard to certain medical problems, "We don't know." Science in the past has been every bit as dogmatic as certain expressions of religion. Less than a generation ago, we students of physics were told that the atom was indivisible. It was a dogmatic statement without qualification or reservation. It was dogmatism pure and simple, but it was false. Nagasaki and Hiroshima have shown how terribly false it was.

While the clergyman deplores his own lack of visible results, and is all too conscious of the failure of spiritual values to remedy great social evils that are still in our midst, he has a feeling of kinship with the physician, who is still challenged by polio, cancer, heart disease, and the common cold.

The clergyman and the physician are on the same side, although they may not be close together in the batting order. We are both interested in stomach ulcers—the physician in their treatment and the clergyman in their prevention. Given a dislocation of the normal function of the gastric juices, the physician is concerned about what that does to the lining of the stomach. The clergyman is concerned about the hypertensions, the neuroses, the phobias, and the anxieties that cause the dislocation. We, and you, are agreed that worry causes stomach ulcers, if this is not an oversimplification. The clergyman has the antidote to worry, but it is not dispensed in a bottle.

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* This is the twenty-fifth in a series of guest editorials by distinguished physicians and laymen.

The clergyman might roughly define a human being to be, "a created soul living in vital union with an organized body." Or, to use another figure, man is a soul, or personality, or ego living in a house of human flesh. In the thought of this figure of speech, the clergyman is primarily interested in the tenant, whereas the physician is primarily interested in the house. But the close and mysterious relation of the tenant to the house is a field still being explored, and surely we must explore it together.

Is it not significant that the physician straightening up from bending over a deathbed will whisper, as he stuffs his stethoscope in his pocket, "He's gone." At such a moment we do not press the physician for an explanation of the language he used or the meaning of the words. We would not quibble about the electrocardiac impulse, for he knows and we know that the simple fact is that the tenant has vacated the house, and how well he was equipped for his journey lies, for the most part, within the clergyman's province. But surely the spiritual ministry has functions and prerogatives while the tenant is still in residence.

Dr. Loring T. Swaim of Boston has said, "It has been increasingly evident, as pointed out by doctors everywhere, that physical health is closely associated with and often dependent upon spiritual health. No constitutional disease is free from the effects of mental strains, which are part of life. Rheumatoid arthritis is no exception." The *British Medical Journal* puts it this way, "There is not a tissue in the human body wholly removed from the influence of the spirit."

We are discovering that there is a closer relationship between our minds, our emotions, the state of our spiritual health, and our bodies than we thought possible a few decades ago. Is it not becoming apparent that the ministry of the clergyman is good therapy at other times than the night before an operation? It may not be long until every first class hospital has on its staff a clergyman, trained in psychiatry, who will minister to the tenant while the physicians and surgeons minister to the house, and instruct him in that way of life that will keep the house strong and healthy and the tenant happy to enjoy fullness of life. In this surely we are partners with each other, as we are partners with Him Who is the Giver of life.

Peter Marshall, D.D.

Minister of New York Avenue Presbyterian Church and Chaplain to United States Senate

MEDICAL EDUCATION AT THE CROSSROADS

According to numerous observers, it would appear of late years that many economic and social features of our American way of life have reached a rendezvous with a "crossroad," which carries the implication that at the crossroad there must come a moment of decision as to the future course the traveler shall pursue. Crossroads were the first highways to bear directing traffic signs, one being carried down through history in the rhyme of Mother Goose, as pointing the way to Banbury Cross, where no doubt other important directives might be found.

Medical education has now come to the crossroads where a decision must be made as to its future course. It has been brought there through sharing in the economic ills which have become epidemic during the last few years, attributed etiologically to two factors, namely, (1) increasing costs of medical education, and (2) drying up of sources of philanthropic financial revenue.

It is an admitted fact that fees from student matriculates are entirely inadequate to pay the costs of a four-year course in medical school. Increasing demands for college courses in premedical education as well as the cost of living during hospital internship and residency have added tremendously to the financial outlay of the individual student who essays to enter the medical profession. His tuition charges could not be raised to keep pace with the greatly increased costs of teaching without almost prohibitive restriction of admissions to the favored children of the rich, who, as experience has shown, do not always possess the vocation which is the necessary endowment of the good physician. He who would cultivate, woo and win the favor of the Muse of Medicine must possess the ardor of a devoted lover and the perseverance of a suitor inspired with the tropism of affection for the healing art.

To the advancing costs of the technical armamentarium of laboratories, dissecting rooms, libraries, etc., and even the increasing expenditures for supplying clinical material in teaching hospitals and dispensaries, now usually conducted at a financial loss in spite of partial subsidy from tax funds, must be added the ever rising costs for salaries to medical teachers, whose ranks are being depleted by desertions to the practice of medicine because many professors and associates cannot meet living costs for themselves and their families at the present salary levels.

In recent years no well equipped medical school fails to possess in its faculty of basic science branches an entire staff of "whole-time" teachers and associates, while not a few have extended this coverage to include the majority of teachers in the higher clinical branches. Such whole-time teachers of high rank and attainment may only be secured and held by the inducement of adequate salaries.

Plant equipment, to be modern and complete, is at the present time a costly item in medical education. Newer methods and technics of teaching are all equally expensive. For example, at a meeting of the Association of American Medical Colleges held in Chicago last month, considerable time and attention were directed to the consideration of the advantages of audiovisual education of undergraduates, i.e., sound-film teaching. While all seemed to agree as to the advantages of such instruction, Dean Walter A. Bloedorn pointed out that the cost of preparing a teaching film[4] was in the neighborhood of $20,000 per film, the production costing about $1,000 a minute for the average twenty-minute record. There are few medical schools which could expend a thousand dollars a minute for creating such technical aid in their teaching program!

There is now much hue and cry about increasing the number of physicians and dentists. The number of "health bills" annually presented to the Congress to extend medical care would of necessity call for increased medical and dental personnel to implement such grandiose programs. How is such production to be accomplished? Increase in student admissions means the assumption of further financial liabilities by the medical schools already struggling to educate the members of their present enrollment, with no guarantee of increased revenues to keep pace with such liabilities.

The various states, in many instances, now possess state universities with medical departments and often university hospitals. Any university president will frankly admit that the school of medicine is a most expensive branch of the establishment over which he presides, often requiring great financial sustaining outlay in relation to that of other departments.

Last year there was issued by Alan Valentine, President of the University of Rochester, on behalf of all signatory institutions, a "Statement on Medical Education Made Jointly by Presidents of 19 Universities," only a part of which may be quoted because of lack of space. Several of the concurrent views expressed are worthy of consideration here. The report states in its beginning paragraph:

"We feel it our duty, as presidents of universities with medical schools, to inform our fellow citizens of the uncertain future of medical education.

"We who sign this statement represent only our own institutions, which comprise but a fraction of the medical schools of the country. Our sense of the immediate need of a statement of our own views, and our reluctance to initiate any effort which might be regarded as a nationwide campaign, precludes at this time an attempt to associate all institutions of medical education with this statement. We do not speak for them or for associations representing medical education, but we have reason to believe that they would support our views. . . .The future of medical care and public health depends upon medical education. The present provisions for ensuring a continuing supply of well-trained physicians are inadequate. They are inadequate because the medical schools which provide that supply are inadequately supported in terms of future needs. Few if any of the seventy recognized medical schools in the United States can be confident, with present resources, of maintaining in the future their programs at the essential high level. . . . Unless existing conditions are quickly changed, medical education will decline in quality, and medical research will falter."

Among the signators are the presidents of Cornell, Duke, Harvard, Northwestern, Johns Hopkins, and of others of equal high rank in the field of medical education.

If state aid to medical teaching is becoming an increasing burden, especially among the poorer states, will it become necessary to ask Federal assistance in support of medical education?

At the present time there is a trend toward seeking Governmental financial aid in general education for elementary and secondary schools. It is believed to be the intent of Congressional leadership to bring to the floor of Congress during the present session S.472, which authorizes an annual appropriation of 300 million dollars to assist states in equalizing educational opportunity through Federal grants of not less than $5.00 per child of school age. Additional amounts would be provided for poorer states.

Will a similar demand be made for asking Federal participation in support of medical teaching itself? There seems to be a growing concern in this project as shown by the interest of the Federal Security Administrator, Mr. Oscar Ewing, who, it is understood, is giving thought to asking the Congress to initiate such legislation.

In its issue of March 6, 1948, the *Journal of the AMA*, under the caption, "Federal Aid to Medical Students," announces: Representative King, California, proposes by H. Res. 466 to instruct the House Committee on Interstate and Foreign Commerce to formulate, consider and report to the House appropriate legislation authorizing the Public Health Service to establish and finance medical scholarships in recognized medical schools of the United States.

There exist several precedents in which the Congress has made available grants-in-aid for the teaching of specific disciplines in the field of education. Among the first of these is the Morrell Act, adopted by Congress in the year 1862, the annual appropriations for which (amounting to about $250,000 a year) continue to the present day (U. S. Code, Annotated, Title 7, Chapter 13, College Aid Grants). The purpose of the Act is to "provide a perpetual fund, the capital of which shall remain forever undiminished, to the endowment, support and maintenance of at least one college where the leading object, without excluding other scientific and classical studies, and including military tactics, shall be TO TEACH SUCH BRANCHES OF LEARNING AS ARE RELATED TO AGRICULTURE AND THE MECHANIC ARTS."

The National Cancer Institute, a branch of the National Institute of Health of the U. S.

Public Health Service, has been allowed a total appropriation of $14,000,000 for the fiscal year ending June 30, 1948. In addition to providing for cancer research, the Act which establishes the Institute (Public Law no. 244 of the 75th Congress) authorizes the Surgeon General "to provide training and instruction in technical matters relating to the diagnosis and treatment of cancer; to provide fellowships in the Institute from funds appropriated or donated for such purposes." In accordance with this authorization, $1,500,000 has been allocated for the current fiscal year for "medical school education grants." As of February 1, 1948, a total of $894,728 has been made to 40 medical schools; grants of $58,209 have been made to 12 schools of dentistry." In his budget message to Congress, the President recommended an appropriation of $10,416,000 to provide additional grants FOR TRAINING OF MENTAL HEALTH PERSONNEL and to inaugurate a research grant program in mental health.

A third source of medical grants-in-aid, although very limited, is the U. S. Children's Bureau, which provides certain funds for the "training of personnel."

The precedents above noted show that the Federal Government is actually now assisting medical education through grants-in-aid. The fear that Governmental financial subsidies might lead to paternalistic encroachment of Government in the practice of the healing art has probably held in restraint any concerted demand by the medical profession that monetary aid be granted from Federal funds to assist the embarrassed medical schools to maintain and increase medical teaching of high quality.

Such fears are of questionable validity for the reason that teaching subsidies through Federal grants-in-aid would not mean the entrance of Government into the practice of medicine. There is a vast difference in Government taking part in the actual granting of health services to the general population and that of Federal subsidies to medical education. No patient-physician relationship is disturbed; no middleman in the distribution of medical care is involved; nor could such Governmental subsidy to teaching institutions be construed to indicate a beginning of the "socialization of medicine."

In recent years the farmer has been subsidized by Government in its efforts to equalize the costs of living through "parity payments" to the tiller of the soil,—yet no plowman has been "socialized," although he may have been disgruntled when ordered to kill off his little pigs or plow under every third row of growing cotton plants, to which even his faithful mules objected. No land-grant colleges have complained of encroachment upon their autonomy through land-grant aids during some 86 years of Federal gratuities. One has yet to hear any weeping or wailing from our medical schools throughout the war years when subsidies of monetary aid were given generously to both students and medical colleges alike, a timely and supportive intravenous financial booster appreciated by all parties concerned.

Competent observers apart from the field of medicine have voiced a plea for assistance to medical schools through provision of more adequate tools of teaching, among them being the president of the Rockefeller Foundation, Raymond B. Fosdick, who states in his 1946 review of the Foundation as follows: "A survey of American medical schools indicates beyond question that what is urgently needed is not money earmarked for projects, but free funds for training of physicians. . . . The increased cost of living is tempting—indeed, in some cases is forcing—the teachers of medicine to abandon their work in the medical schools and to take up private practice. . . . Medical schools need money desperately, but not for projects. They need it for salaries, for basic plant facilities, for clinical services."

Dr. Thomas Parran, after an experience of twelve years as Surgeon General of the U. S. Public Health Service, spoke as follows before a meeting of the Association of American Medical Colleges in October, 1947: "From the national viewpoint, gifts and endowments cannot be depended on to meet the steadily rising cost of medical education. If the schools are to continue to offer adequate medical training, they must have financial stability. This can be assured, I believe, only by public funds. Any such aid must ensure that the conduct of medical education in every school continues to be the responsibility of medical educators."

The conception of Governmental aid to medical education deserves deep consideration by all who are concerned with the continued progress and survival of medical teaching, with no lessening of the high standards attained during recent years.

Let there be no fear that the propagation of the faith of Hygeia will be relinquished by her disciples, for their trust and teaching devotion have been evidenced since the days of Hippocrates and Galen. Medical education will endure and grow in stature, even without treasure and riches which are now so conspicuous by their absence. Medical schools will continue to receive in large measure that endowment of faith and service on the part of their professors and instructors which stems from the precepts of that earliest of teachers who gave to us this obligation in his oft quoted oath: "I will impart this art by precept, by lecture and by every mode of teaching, not only to my sons but to the sons of him who has taught me, and to disciples bound by covenant and oath, according to the Law of Medicine."

J. S. W.

MEDICAL WRITING

Good medical writing does not differ from other forms of reporting and exposition where clarity, brevity and accuracy of expression are essential. Unfortunately many papers are published today that fail to add to our knowledge, not because the subject matter is trivial, but because the presentation is so dull and confused that even useful information is obscured and the reader hopelessly discouraged.

In preparing a manuscript for publication, it is obvious that the author should be thoroughly acquainted with his subject before he begins the first draft. The research and basic work must of course be completed. Encyclopedic knowledge may lead initially to verbosity, inclusion of seemingly important irrelevancies, and general disorder and confusion, due to incomplete digestion of the material to be presented. However, further thought, discussion, and an early draft will aid in the crystallization of ideas so that they may be marshalled into orderly array. The necessary review of the literature is facilitated by a carefully prepared bibliography, easily accessible on suitable cards.

An outline is essential as a guide to the orderly presentation of material. In its barest form, it should include a definition of the purpose and scope of the paper, a review of pertinent literature, a statement of the problem and its solution, a discussion, and a summary. The whole plan of presentation should be carefully assayed from the reader's angle. Are ideas presented logically and has emphasis been properly placed on the really important facts? A sharp distinction should be made between the opinions of other authors and the original work presented. Correlation and comparison with previous work belongs in the discussion. The summary should embody the thought of the paper in the fewest words possible. The excellence of the summary often determines whether a paper will be read in full since many read the summary first. Do not confuse "summary" with "conclusions." A summary is a digest of the substance of the paper while conclusions are inferences and deductions which may not be substantiated in the text. Results of experiments should speak for themselves.

Following the tentative outline of the paper, the first draft should be as simple and brief as is consistent with adequate exposition. The first copy should be reviewed for content, sequence of ideas, verbosity, and errors in grammar and sentence structure. Several revisions almost invariably precede the completion of a paper of real worth. In the process of rewriting certain books will be helpful: an unabridged dictionary or one of at least collegiate level, a book of synonyms, and a standard textbook of composition. Two other valuable aids to the author are Fishbein's "Medical Writing" and Mellish's "The Writing of Medical Papers."

Length is no indication of merit and has the unfortunate effect of frightening away many potential readers. Sentences should be brief, concise and direct. A sentence should be short enough to be read and understood at first glance. For instance, how many readings would be necessary to comprehend the following: "All of us are interested in the theories of the etiology of peptic ulcer of which most recently we are concerned with the effect of elimination of vagal stimulation through interrupting the cerebral mediatory influences of these nerves by intrathoracic division of the vagal pathways thereby reducing gastric secretion and motility"? Verbosity and garrulity as displayed by long, involved sentences suggest confusion in the author's mind. Long sentences are an invitation to faulty syntax and self-contained contradictions. The deliberate use of transitive verbs in the active voice tends to keep sentence structure simple and meaning clear. Colloquialisms, involving excessive use of intransitive forms, indicate hasty preparation, inadequate vocabulary, or indolence, and have no place in scientific exposition. Repetition, unwitting or otherwise, is an index of careless writing and destroys the reader's interest. Irrelevancies, no matter how interesting or dear to the author, should be avoided. Clichés produce a stilted, trite effect. Beware of figures of speech. Similes and metaphors are too often misleading and inappropriate; they tend to get out of hand and are frequently in bad taste.

Knowledge of the meaning and accurate use of words is most important in conveying precise thought to the reader. A short word is preferred to a long one if its meaning is as sharply defined. "Quantification of these minute openings is of course difficult." It is even more difficult to understand why the author used "quantification of" instead of "counting."

The misuse of words is indefensible. There is no excuse for calling a patient a "case." No patient "develops" pneumonia; he may have, contract, or succumb to pneumonia. The meaning of develop is "to disclose, reveal, to unfold more completely, or to make more available or usable." A surgeon does not "operate a patient"; he performs an operation or operates on a patient. The expression "the patient's pathology was thus and so" is gibberish, since no patient has yet had what is defined as "the science treating of diseases, their nature and causes, more specifically, the condition of an organ or fluid, produced by disease." The patient suffering from a "malignancy" is in the curious predicament of having a generic condition which is defined as "the state or quality of being malignant," when actually he has cancer or a malignant tumor. A "toxic patient" is a "poisonous patient." Euphemisms are almost as offensive in scientific writing as deliberate crudities of expression.

Do not coin words, as for example, "I sulphanilamized the patient." Do not use a noun for a verb. Do not use nouns for adjectives unless the adjectival equivalent would sound awkward or is lacking, as in "patient load." An example of an unwieldly and incorrect form is "normal wear and tear deterioration products." As far as possible keep the manuscript clean of adjectives. Clarity depends on the use of words of action which are verbs. The sounds of words, particularly alliterative words, may prove so fascinating to the writer that they induce him to misuse words in the mistaken belief that a gain in rhetorical effect can compensate for a gross error in meaning.

The past tense is employed in the review of the literature because it does not necessarily voice the present opinion of the authors. The past tense is also employed in histories which are accounts of past events. Generalizations should be in the present tense, since they are statements of current beliefs.

All illustrative material should be carefully selected with regard to pertinence. Pictures and especially photomicrographs lose at least 25 per cent of their detail and clarity in reproduction, and unless they are clear they should be discarded or replaced. Captions and legends beneath pictures, graphs and tables should be sufficiently clear and self-explanatory to stand alone.

The inadequacies and defects in much medical writing today lie as an indictment against a system of education in which training to write and speak intelligible English is neglected. Knowledge of grammar and syntax and supervised practise in composition are necessary if one is to learn to write well. As in the development of any skill, practise makes perfect. There is no substitute for writing, rewriting, and revision. Broadening the base of education by emphasizing the study of English and its application to writing will enable the student to present his material simply and readably and should aid in crystallizing his ideas. Courses in English, composition and public speaking should be included in the curricula of all medical schools. Such training should in later years dispel the doctor's reluctance and fear to put on paper the results of experience and research. Badly written papers profane a tradition in which eminence in expression once paralleled the exploration of new frontiers in medicine.

F. C. FISHBACK, M.D.

In and Out of Focus

BY THE OBSERVER

A General Practitioner Speaks

Those who attended the Twenty-Second Annual Banquet and Alumni Reunion of the George Washington University Medical Society at the Mayflower Hotel on March 20 were rewarded with an excellent program. Secretary of Agriculture Clinton P. Anderson, the principal speaker, was in top form. Witty, fluent, and always interesting, he managed to make a serious subject—food—informative and entertaining. Excellent as the Secretary was, there were others who did much to make this a wholly delightful and memorable event.

The Society wisely dedicated the occasion to its general practitioner members. Dr. Herbert S. Gates, Secretary of the District Medical Society's newly organized Section on General Practice, spoke briefly on the reasons for establishing the Section, following which he introduced Dr. A. Magruder MacDonald, Chairman of the Section's Executive Committee. He then called upon Dr. R. Lee Spire, Chairman of the Section. Dr. Spire simply and effectively stated the general practitioner's case. Here is what he said:

"You have called on me as a general practitioner. I crave your indulgence for a few moments while I talk about me. Not me as ME, but as a prototype—a composite of the thousands of doctors in general practice all over our land.

"Nearly forty-two years ago I was given the legal right to append the letters 'M.D.' after my signature. For many decades and in many lands thousands of young men have been given the like honor, but I am sure that there was never anyone more proud of that honor than I. I was a doctor—not an 'ist' or an 'ologist,' but just a plain doctor. In the many years that have elapsed nothing has ever transpired to lessen that pride.

"I opened an office in a growing community and became a part of the life of that community. As I became known and as my practice grew, I was consulted not only on medical matters but on every conceivable subject. I was a friend of the people in that group, and they were my friends. There was a large parochial school in the neighborhood and the little boys always touched their caps when I passed or spoke to them. As these boys grew to manhood I strove to merit the respect they accorded me as a physician. A kind of flattery?—probably—but I liked it. I did not even mind being called 'Doc.' It meant to me no lessening of dignity. It was more like being called a nickname by some cherished friend. And this mutual respect and friendship paid dividends—dividends to the patients and to me.

"Many times on coming downstairs from the sickroom, mother would have a plate of fresh cookies or a piece of cake and a glass of milk. While enjoying these, there would always be a little chat, and in the confidence begotten by these little intimacies, frequently mother would mention some little thing with an apology for its being trivial—something to which she did not ascribe sufficient importance to justify a visit to the office.

"She might mention that she had found a little lump in her breast, 'Nothing important, Doctor,' but often examination revealed a malignant tumor in time for surgery to prevent an early death from cancer. Or she might tell me that father had felt some twinges of pain in his chest while shoveling snow or taking out the ashes. Investigation has enabled me many times to diagnose an early coronary disease and prolong life for a number of years.

"Sometimes it would be that Mary was so tired when she came home from school—her appetite wasn't good, and once or twice there was a flushed face and mother thought there might be a little fever. Examination and X-ray studies made possible a diagnosis of pulmonary tuberculosis before infection by other members of the family occurred, and in time for successful treatment.

"Again it was Johnnie who was having 'growing pains' and could not play ball because of 'shortness of breath.' 'You know, Doctor, he has grown so fast in the past year or two.' Johnnie's trouble was not 'growing pains.' It was a rheumatic heart disease, and in many instances there was still time to prevent too serious heart damage.

"This patient-doctor relationship has no substitute—it must not be lost. It is the very heart of American medicine. If the art of the general practice of medicine is restored to its proper place and dignity by organization or by the swing of the pendulum away from the present tendency to overspecialization, so that more young men are attracted to the field of general practice, this relationship will not be lost.

"We have been, as it were, playing a game of football. For years the general practitioner carried the ball and made all the scores. Lately, however, someone has stolen the ball from us and we are left just looking on. We must carry the ball again. We need the specialists to run interference and block out tacklers that are too tough for us, but the job of carrying the ball is ours and we must get it back. We can get it back only if we can bring about a recognition of the value of the family doctor and restore him to his rightful place in our American life."

At the conclusion of his remarks, Dr. Spire was given an enthusiastic ovation. Many favorable comments were heard as the crowd drifted out of the Mayflower's Grand Ballroom. Among the enthusiastic listeners was your Observer, who asked Dr. Spire for a copy of his remarks. He said they were extemporaneous, but he believed he could recall them. The above is the result, and your Observer feels his readers will agree it is a most satisfactory one.

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"There Are Veterans and Veterans"

It is no secret that veterans of World War II have been receiving medical and hospital benefits to which they are not entitled. Most physicians have said little about it for fear of incurring the displeasure of veterans and of being charged with selfish motives. However, a few have been less reticent.

Writing in the February, 1948 issue of *Harper's*, Dr. Frederic W. Taylor, described by the editor as a surgical consultant to a veterans' hospital, an assistant professor of surgery, and a Lieutenant Commander in the Naval Medical Reserve, states the situation in blunt terms. In an article entitled, "You're In—You're a Veteran," Dr. Taylor says:

"At the present time only about twenty per cent of all the thousands of veterans' hospital beds are filled with service-connected cases. What are the other eighty per cent? They are men and a few women who are hospitalized for some infirmity not remotely connected with the War or their military services. They are admitted for practically any ailment you can name."

"Do you suffer from backache, tonsillitis, bunions, pneumonia, piles, hernia, boils, colitis, enteritis, apendicitis, flat feet, dizziness, or nervous breakdown? Think nothing of it. A benevolent government will take you in hand. Or, in the future should you smash yourself and car in a highway wreck, get stabbed or shot in a tavern brawl, don't give it the slightest care—the taxpayers are only too glad to mend your body, if not your ways. Why? You're a Veteran. Your're in!"

The veteran need not be in a hurry about taking advantage of the health services available to him, for Dr. Taylor says, "The taxpayers show no signs of shutting off the flow from the horn of plenty. Should they grimace at high taxation, a little squeeze from the 'veterans' organizations' will bring their Washington representatives back into line. A group which musters well over a third of the Nation's votes is not to be considered lightly."

The situation which exists, Dr. Taylor observes, is not the fault of the Veterans' Administration. He says the Administration is doing an excellent job, and has succeeded in eliminating many abuses. This has been difficult because of the pressure applied by veterans' organizations.

The intent of Congress, Dr. Taylor explains, was not that the hospitalization of veterans should become a "free-for-all." In fact, the Congress provided penalties for those who made illegal use of the service. But, according to Dr. Taylor, the law has been circumvented. Here is how it is done: A veteran needs to have his tonsils removed. He is sufficiently affluent to pay a physician for this service. About to enter a hospital, he is accosted by a "veterans' organization" representative who informs him that he is entitled to the necessary surgery at Government expense. If he pays for it, his informant tells him, he is doing so unnecessarily. So the veteran sends for, or is given, a Veterans' Administration Form P-10. When he examines the form, he learns that item 6 reads: "Are you financially able to pay the necessary expenses of hospital . . . care?" He protests that he is able to pay, but the "veterans' organization" representative urges him to reply "no" to the question. He warns him that there may be complications, some other disease being discovered after he enters a hospital. This may involve more expense than he anticipated. Convinced that he had better follow the advice given him, the veteran has less trouble making up his mind on item 7, "Are you able to pay for transportation to and from a Veterans' Administration Facility?" After all, he is told, how does he know how far he will have to travel to have his tonsils removed?

Despite the known falsehoods sworn to by veterans seeking medical aid, Dr. Taylor says the Veterans' Administration can do little about it because it has no funds for investigative purposes. When attempts have been made to make the law work as intended, there has been "frantic opposition from the 'veterans' organization' service officer."

"No medical care is too costly, no medical treatment too good for the veteran injured in active service. He must have the best." But Dr. Taylor concludes, "There are veterans and veterans."

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"Housecleaning . . . Too Long Delayed"

The American Medical Association has called upon leaders of the medical profession to take immediate steps to rid their medical societies of physicians guilty of accepting rebates, kickbacks and commissions from firms or individuals furnishing goods or services to their patients. Obviously angered by recent disclosures, the AMA's Board of Trustees let go with both barrels in a statement appearing in the Association's *Journal* for January 16, 1948. The Board said:

"The pride of medicine as a profession has always been its freedom from the taint of barter and trade in the sick patient. Physicians must give their wholehearted devotion to the care of the patient; no other objective must be given precedence over considerations of the patient's need. Nevertheless, the charge is made that some physicians have forgotten the ethical principles that prevail in the relationship between doctor and patient and have selected the surgeon willing to make the greatest division of fees rather than the one best suited to perform the operation. Ophthalmologists have sent the patient for lenses to the optician who returned a proportion of the fee rather than to the optician who rendered the highest quality of optical service. Occasionally orthopedic surgeons and others who utilize the work of the maker of braces, splints and elastic bandages have been willing to accept commissions from such manufacturers and have delegated the procurement of these accessories to the agency offering the largest commission rather than to the one most painstaking in production and most reasonable in price. From time to time criticism has been leveled against pharmacists who have offered commissions to physicians on the prescriptions sent to them and to the physicians who have accepted such commissions. Wherever barter and trade have insinuated their insidious and evil aspects into the practice of medicine, the quality of the service has depreciated. The morals of the physicians and the commercial agencies that deal in these unwholesome profits in this marketing of medical care have already deteriorated.

"From the beginning of its entrance on the medical scene, the American Medical Association has fought this menace to the quality of medical service and to the good repute of medical practice. Resolutions have been passed by the official bodies of the Association unequivocally condemning such practices. The Judicial Council has repeatedly urged the expulsion or other action against physicians proved to have participated in such procedures. The leaders of surgery, ophthalmology, orthopedic surgery and pharmacy have been unanimous in pointing out the extent to which such commercial considerations may break down the good repute of the specialties concerned. The American College of Surgeons adopted an oath to be taken by its fellows to the effect that they would not participate in the secret division of fees. The Principles of Ethics of the American Medical Association have declared the unethical character of such divisions—direct or indirect.

"Now the development of greater complexity in medical practice and in medical relationships has introduced new factors into this problem of barter and trade. The development of roentgenology (X-ray examination and treatment) as an important medical specialty and the establishment of clinical pathologic laboratories to which physicians send patients for the making of highly technical and often costly tests have introduced new sources of rebates, kickbacks and commissions. In some communities means have been proposed for evading the condemnation of medical organizations and societies through the establishment of corporations, coöperative laboratories and roentgenologic offices of multiple ownership.

"As might have been anticipated, the ultimate development was recognition by governmental agencies of the fact that the unprotected public was being exploited by such methods. The first warning and one of tremendous significance was the indictment by the Department of Justice of two manufacturing optical agencies and of a considerable number of ophthalmologists who participated in a plan which took hundreds of thousands of dollars from unknowing patients. A full report appeared in *The Journal of the American Medical Association* when the Department of Justice took this action during 1946. A popular periodical with millions of circulation has called on the medical profession to cleanse itself as it has repeatedly cleaned its own house in the past. The House of Delegates asked the Secretary of the American Medical Association to call the situation to the attention of every state and county medical society in the Nation and to urge on these societies the initiation of the necessary steps toward ridding medical practice of these parasites. The Better Business Bureaus in several large communities, notably Los Angeles, have begun a campaign of enlightenment of the public regarding the extent to which these abuses prevail in their communities; they too have called on the medical profession to take the necessary steps to stop this pernicious practice.

"The housecleaning has been too long delayed. Biology has proved that any living organism that tries to maintain itself in the presence of filth invariably dies. The Board of Trustees of the American Medical Association therefore calls on leaders of the medical profession in every community in which the Association is represented to act promptly, remembering, however, the necessity for proceeding in due form by the filing of formal charges against physicians known to be participating in such methods, thus offering an opportunity for the presentation of evidence and a suitable hearing so that the innocent may not be harmed but the guilty may be properly exposed and punished."

The California Medical Association was one of the first societies to respond to this appeal. It announced a three-point program which would eliminate rebating practices by physicians, optical companies, X-ray firms, and medical supply houses. CMA proposes to ask the state legislature to enact legislation prohibiting rebates and providing severe penalties for violation of the law; to urge the Better Business Bureaus in California to exclude from membership any optical companies, laboratories, or medical supply firms who are engaged in giving or receiving rebates; and finally to request all county medical societies to act vigorously by disciplining physicians who are engaged in a rebating practice.

If Washington physicians are guilty of objectionable commercial practices, your Observer has heard little about it. Surely if there were any large scale rebating going on, it would be common knowledge among the medical profession. However, there is no reason for being smug about this situation, even if it be as good as it appears. No one believes that there are not some unethical practices in the District of Columbia in need of attention. As they come to light, they should be looked into promptly, and, if warranted, immediate action should be taken.

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Medical Emergencies at Night

Charges that physicians were accepting rebates, kickbacks, and commissions were not the only basis for criticism of the medical profession in recent weeks. Inability to obtain the services of physicians at night, it appears, is also a source of widespread irritation. Officials of the AMA reported that they had been deluged with complaints from patients.

Admitting there is justification for complaint, the *Journal of the AMA* makes a point of a fact well known to physicians—very few urgent calls for doctors are emergencies. The *Journal* states:

"In one western community a fire chief gave to the press information to the effect that he had called twenty-four doctors and had been unable to secure attendance by any of them. A subsequent investigation indicated that he had actually talked only to two osteopaths who had stated that the case was not within their province—(strange indeed!)—and that he had been unable to reach physicians. In some instances the difficulty of securing a physician has been made part of a battle to secure control of the ambulance system or the first aid organization of the place concerned.

"Notwithstanding the explanation of these isolated instances, many physicians do dodge the making of calls on patients in the late hours of the night or early morning; the crowding of physicians' offices and hospitals makes difficult in large cities even the securing of a prompt appointment in the office."

"Many persons and some physicians seem to believe that a doctor must respond to any call that comes to him. The law does not cover this situation as far as is known. The Principles of Ethics are explicit:

" 'A physician is free to choose whom he will serve. He should, however, always respond to any request for his assistance in an emergency or whenever temperate public opinion expects the service.'

"Interpretation of this statement should not be difficult. In one city recently a child was struck by an automobile and sustained a fracture. The accident occurred on a corner next to a great building in which were housed many physicians. Someone from the street who had seen the accident attempted to secure the services of a half dozen physicians who were at the time in their offices, yet all refused to respond to the call, offering as excuses the specialties which they practiced or the fact that they were at the moment engaged with a patient. Public opinion condemned them unequivocally; their failure to respond greatly injured the good will of the public for the medical profession in the community as a whole.

"When the pressure on the medical profession becomes severe, as it is now in this postwar period, demands are likely to press too heavily on the available service. Organization of the medical profession to meet the emergency needs was a conspicuous part of the solution of wartime problems. Some communities have, however, established permanent organizations for attending to such demands. County medical societies in some areas maintain a physicians' telephone exchange which takes the responsibility for locating physicians if response is not made to the ringing of the telephone in the home or in the office. For meeting emergencies the exchange maintains a list of physicians who are willing to make calls at night. Many young physicians gladly list their names with such exchanges. The medical societies of the District of Columbia, of Milwaukee, and of Oakland, Calif., have established physicians' service bureaus and have registered the names of physicians who are willing to respond to calls from persons unknown to them who are seeking a physician. These bureaus will supply to any caller the names of three specialists when a specialized service is requested. Information is also maintained as to physicians who are available during the day or at night and the offices in which they are available. Many of the night calls come from older physicians who request the bureau to send young practitioners on emergency calls. These are samples of specific organizations which are meeting the public demand for emergency medical service."

The *Journal* urges county medical societies to follow the lead of the Medical Society of the District of Columbia, the Milwaukee County Medical Society, and a few other societies by establishing 24-hour telephone exchanges. Since your Observer organized the Washington and Milwaukee exchanges, it is of considerable satisfaction to him that they are adequately filling a public need. He knows from experience that real emergencies are rare. Nevertheless, physicians should be available at all hours so that the occasional bona fide emergency call will receive immediate attention. It is to be hoped that many more county medical societies will meet this need in whatever manner is most expedient in their communities.

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They Are Not Deceived

There never was a time when emotional factors in disease seemingly held more interest for physicians than at present. Whenever they discuss this subject, there is usually general agreement that these factors have not received the attention they deserve. Yet one is led to wonder if physicians really mean what they say. For the attitude of many of them toward their patients who have emotional problems belies their professed beliefs.

Physicians outside the psychiatric field readily admit that most patients come to them with "functional" disorders. However, they show little patience with them or their complaints. This is especially true of the neurotic patient. Many regard such patients with disdain or pity. The attitude seems to be that these individuals are weak, lacking in character, or plain malingerers. On the surface, physicians are sympathetic, but in private discussion, their references to neurotic patients are such as to make it clear that they regard them as inferior.

Physicians should not be deluded that their attitude is unknown to patients. Not long ago, your Observer talked to a friend about his difficulties which were largely of an emotional nature. He suggested that his friend see a psychiatrist or talk to his doctor. Much upset at the proposal, he said he knew how physicians generally felt toward persons with emotional problems and that he would not place himself in this category even if he would benefit by doing so. If it were known that he was "unstable" his physician-friends would not feel the same toward him again. Small wonder many patients refuse to admit their emotional conflicts when they might readily be remedied.

Why do so many physicians take this attitude? As one psychiatrist said, it perhaps stems from the attitude toward psychiatry in medical schools. It is only very recently that an enlightened point of view has been taken toward this subject. The situation is now improving rapidly, and recent graduates will deal much more intelligently with psychiatric problems than their predecessors.

There is still hope for the physicians who are now in practice, if they develop genuine sympathy for what they call "neuros" and endeavor to help them solve their difficulties. Certainly if they take this matter seriously, they will deal just as conscientiously with personality maladjustments as with diseases of an organic nature. To do less is to fail their patients.

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Chances of Reaching Sixty-Five

Writers such as our own Dr. Edward J. Stieglitz, Dr. Wingate M. Johnson of North Carolina, Dr. Theodore G. Klumpp, President of the Winthrop Chemical Company, and others who speak with authority on probems of the aged, are widely read and quoted. Fortunately most of what is being written holds encouragement for those past their middle years. For example, the *Statistical Bulletin of the Metropolitan Life Insurance Company* for February, 1948 comes up with some good news about life expectancy.

> "The prospect of celebrating a 65th birthday," the *Bulletin* states, "was not too bright for a boy born at the beginning of the century, the chances being less than 40 in 100; for a boy born about 1940, the chances had increased to 58 in 100; and by 1945, they were more than 60 in 100. . . . On the basis of mortality conditions around 1900, a young man 18 years of age had 51 chances in 100 of surviving to his 65th birthday; in 1945 the corresponding figure was 65 in 100. With the improvement in mortality since then, the chances have increased further, so that now the chances are fully two in three that a youth of 18 will live to his retirement age."

The *Bulletin* breathes optimism for the "boy born at the beginning of the century":

> "Men who already are launched on their careers are very likely to live to the end of their productive life. For example, according to the mortality of the white male population of the United States in 1945, the chances of surviving to age 65 are 70 in 100 at age 45, and 78 in 100 at age 55."

Even those who have reached 65 are not at the end of the road by any means. The *Bulletin* says that the prospects of living beyond that age have greatly improved. Expectation of life for males at 65 is greater by one year than in 1900–1902; for females, two years. At the present time, men who have reached the age of 65 have a life expectancy of $12\frac{1}{2}$ years, and females, $14\frac{1}{2}$ years.

The *Bulletin* expresses the view that as infections and other conditions which result in premature death are controlled, the average span of life will be further extended. It closes with a plea for more adequate medical and hospital care for the increasing number of old people who are disabled because of chronic illness.

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Boston AVV's Demonstrate

Late in February, Boston was the scene of a demonstration by antivivisectionists. A state legislative committee opened hearings on a vivisection bill which aroused zealots in the group to an unusual display of bad manners.

According to newspaper reports, more than a thousand persons were on hand when the committee opened its hearings. The bill under consideration would permit pounds to turn over to scientific laboratories for experimentation any animals unclaimed within six days. Senator William E. Nolen, one of the sponsors of the legislation, said that 50,000 stray dogs and cats are destroyed in Massachusetts annually, and "since they are going to die anyway, why not turn them over so that they could benefit mankind?"

Spectators, many of whom held their pet dogs and cats on their laps, hooted the Senator, who hastily explained, "If I thought for a moment that vivisection or vivisectionists practiced brutality, I would be an antivivisectionist. There is no brutality in vivisection." Representative Sherman Miles, co-author of the bill, fared no better at the hands of the audience.

Before the meeting opened, the chairman of the committee warned that those who demonstrated would be ejected. However, the antivivisectionists paid no attention to the warning. Drs. Paul D. White and Robert E. Gross of Massachusetts General Hospital, who appeared for the bill, were hissed. Dr. White said that his first knowledge of the workings of the human heart had been derived from studying dogs in London. Certain drugs, such as digitalis, he said, were developed through vivisection of animals. Dr. Gross presented children who had been "blue babies" and owed their lives to surgery which had been learned through animal experimentation.

All in all, the hearings in Boston were typical of those held elsewhere except for the inexcusable behavior of the spectators. Certainly the extremists should be kept within bounds. Animals should not be permitted at hearings and some sort of dignity should prevail. Of all places, one would expect more decorum in a legislative hearing in Boston.

T. W.

REPORT OF THE EXECUTIVE BOARD*

The Society's Constitution and By-Laws provides that "nominations for office shall be made orally at the first meeting in March" (Chapter VI, Article II). Although this is the only regular business which the Society is required to take up at this meeting, it offers an opportunity to present other matters which are of special interest or of more or less urgency.

New Offices at 1710 M Street, N.W.: In its report to the Society a year ago, your Board stated that major expenditures were contemplated in connection with remodeling the first floor at 1710 M Street and making replacements and necessary repairs at 1718 M Street, N.W. The Board observed that the latter building, now 27 years old, is in need of attention to prevent deterioration, and that the cost of its upkeep is bound to rise. It proposed that the first floor at 1710 M Street, N.W., be used for MEDICAL BUREAU and additional office space for the Society.

Since that time, the remodeling of the first floor at 1710 M Street has been undertaken. Schreier, Patterson and Worland, architects, Washington, D. C., who have previously done work for the Society, were employed, and plans developed in coöperation with Society officials. Bids were obtained from several firms, one in the amount of $11,250, submitted by Whalen and Spradlin, contractors, Washington, D. C., being accepted. A contract was signed with this firm in which it was specified that the work would be completed not later than January 1, 1948. For one reason or another, the contractors were unable to finish the job on the date specified. The work is now nearing completion, and it is only a matter of two or three weeks before it will be finished.

Most of the space has been remodeled for the use of MEDICAL BUREAU. Their previous quarters were entirely inadequate. Eight regular and five relief operators use the quarters provided for them 24 hours of each day. It is important, therefore, that their surroundings be comfortable and afford opportunities for relaxation.

The additional office space which will be available at 1710 M Street has been badly needed for a long time. Working conditions for the staff in the Society's office have been most unsatisfactory, the reason being that too many employees have been required to work in a comparatively small room. Noise and confusion have not only been disturbing to employees, but have impaired their efficiency.

Your Board is certain that increased efficiency of the staffs at the Society's offices and MEDICAL BUREAU will more than justify the investment being made. As soon as the new quarters are completed, members of the Society will be invited to inspect them. Announcement of the "opening" will be made at an early Society meeting.

Davidson Portrait Fund: Few members of our Medical Society have contributed more to its welfare than Dr. Edward Y. Davidson. As most of you know, he was largely responsible for this building. Many honors have been shown him by the Society; however, none of them has seemed completely adequate.

It was suggested to the Board several months ago that a portrait be made of Dr. Davidson to be hung in the Society's building. This was enthusiastically approved, a Committee on the Davidson Portrait Fund consisting of the following being appointed: Dr. Coursen B. Conklin, *Chairman*, Drs. A. Magruder MacDonald, Oscar B. Hunter, and William P. Herbst.

The date for the unveiling of the portrait will be announced shortly. A program in which Dr. Davidson himself will participate is planned. This is an event in which all members who have resided in Washington for any length of time will wish to participate.

Committee on Medical Care in Public Institutions: Your Board has long been disturbed by reports of inadequacies in the medical service provided inmates of public institutions in the District of Columbia. An editorial dealing with conditions in the Psychiatric Division of Gallinger Hospital, which appeared in the MEDICAL ANNALS for October, 1947, brought the matter to a head. Your Board immediately called upon the Subcommittee on Mental Health to look into the situation.

Subsequently, Congressman A. L. Miller of Nebraska, Chairman of the House District Subcommittee on Health, Welfare and Education, who is a physician, wrote an editorial for the ANNALS in which he directed attention to other inadequacies, calling upon the medical profession to help raise the standards in tax-supported institutions for the sick and the aged. Thereupon the Board created a Committee on Medical Care in Public Institutions. The President of the Society, upon whom rests the responsibility for appointments to committees, chose the personnel of the Committee with the greatest care, for a weak committee would be worse than none at all. At the last Board meeting, he submitted the names of the following physicians: Dr. Maurice A. Selinger, *Chairman*, Drs. A. Clagett Gray, James N. Greear, Carolyn Pincock, and J. Ross Veal. Your Board is confident that the efforts of this Committee will not only reflect credit on the medical profession, but, more important, will result in better conditions in our public institutions.

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* Adopted at a special Business Meeting of the Society, March 3, 1948.

Election of Nominating Committee: Following the usual procedure in electing a nominating committee, a ballot on which there appeared the names of 21 members of the Society was mailed to the membership on January 21, 1948, with instructions that the ballot must be returned not later than February 15. The seven who received the highest number of votes, and who therefore comprised the Committee are: Drs. A. Magruder MacDonald, Charles S. White, Henry R. Schreiber, Hill Carter, Benjamin F. Dean, Dorothy Jaeger-Lee, and Samuel Dessoff. This Committee will present its nominees to you this evening [see MEDICAL ANNALS for March, 1948, page 181].

The Board wishes to remind you that additional nominations can be made from the floor. However, they must be made at this meeting. As stated at the beginning of this report, the Society's Constitution and By-laws requires that nominations must be made at the first meeting in March, and cannot be made after that time except in the event of death or withdrawal of a nominee.

Summary of Membership for 1947: January 1, 1947, the Society's membership was 1,335. This number was increased by the election of 190 new members during the year. However, there was a loss of 65 members, 27 due to death, 1 due to departure from the United States, 14 because of failure to pay their dues, and 23 by resignation. The net gain, therefore, was 125 members.

The largest net increase, of course, was in Active members. This is significant because most of them are now actively engaged in practice in the District of Columbia.

Applications for membership are still being received at the Society's offices. At present there are 44 applications on file. If these are elected and there are no further deaths or withdrawals, the membership of the Society on June 1, 1948, will be approximately 1,504.

There has been some concern expressed because of the increasing number of practicing physicians in the District. However, the U. S. Public Health Service, which made a study of physicians in the Washington metropolitan area and their patient load, determined that the ratio of physicians to population on June 1, 1947 was approximately the same as it was in 1941. It would seem therefore that the community is fully capable of absorbing the new physicians who have decided to establish themselves in the Washington area.

Annual Financial Report for 1947 and Budget for 1948: [Space limitations will not permit the publication of the Report and the Budget. Members who are interested and could not attend the Business Meeting at which they were presented can obtain copies by calling the Society's office.]

Election of Dr. Olin West to Honorary Membership: Through an oversight, this item was not listed on the agenda for this meeting. It therefore remains with you whether or not it shall be acted upon until the required notice is given. Because of Dr. West's advanced years, it seems desirable to elect him as soon as possible.

As stated at the meeting on January 14, Dr. West was General Manager and Secretary of the American Medical Association for more than 16 years. During this period, he was heavily burdened with responsibilities. In fact, his present poor state of health is largely due to his untiring efforts on behalf of the organization for which he had such deep sentimental feeling.

There are few officials who have served the Association more unselfishly than Dr. West. It is therefore not surprising that he is beloved by thousands of physicians who looked upon him as the symbol of strength in a troubled medical world. Now that his career has come to an abrupt close, his loss is keenly felt. Fortunately, it is still not too late to give him the recognition which he deserves.

Other medical societies have honored him as your Board now proposes—that is, by election to Honorary membership.

The Board of Censors has given its approval. Your Board therefore presents Dr. Olin West as a candidate for Honorary membership.

Conclusion: Committees are already under way with their plans for the 19th ANNUAL SCIENTIFIC ASSEMBLY, which is to be held at the Hotel Statler, September 27, 28 and 29. This promises to be the equal of, if not superior to, last year's meeting, which topped all its predecessors.

Communications will soon go forward to members of the Society from the Committee on Scientific Exhibits, urging those who desire to exhibit to communicate with the Committee. Members who are interested are urged to respond promptly.

The ASSEMBLY is now considered to be one of the finest state medical meetings in the country. Because of its prestige, committees usually have little difficulty in obtaining the finest talent and the best exhibits. Successful as the ASSEMBLY has been, it still has greater possibilities. As these are more fully realized, Washington's reputation as a great medical center will become more firmly established.

Respectfully submitted,
FRED R. SANDERSON, M.D., *Chairman*
WILLIAM M. BALLINGER, M.D.
WILLIAM EARL CLARK, M.D.
WILLIAM P. HERBST, JR., M.D.
RAYMOND T. HOLDEN, M.D.
COURSEN B. CONKLIN, M.D.
JOHN MINOR, M.D.
THEODORE WIPRUD, *Secretary*

MEDICAL SERVICE PLAN LAUNCHED

On April 1 MEDICAL SERVICE OF THE DISTRICT OF COLUMBIA, the prepayment plan sponsored by the District Medical Society, and whose business affairs will be managed by Group Hospitalization, Inc., began operation. This plan offers residents of Washington and vicinity an opportunity to meet the costs of surgical and obstetrical services in the same manner in which thousands have met their hospital expenses through Group Hospitalization.

The new plan provides surgical and obstetrical benefits when a participant is hospitalized. If an eligible participant is hospitalized for any of these procedures, the plan also offers the following related services: diagnostic X-ray services, clinical laboratory examinations, and administration of anesthetics. It guarantees free choice of physician, providing the physician has agreed to participate in the SERVICE. Likewise, physicians are guaranteed free choice of patients among subscribers to the SERVICE.

The Surgical Service Plan is available only to subscribers to the Hospital Service Plan of Group Hospitalization, Inc.; however, eligible persons may apply for participation in both plans. Payments for the surgical contract will be made at the same time and in the same manner as payments for hospitalization. Enrollment procedures and policies governing the operation of the Surgical Plan are comparable to those of Group Hospitalization, Inc.

Any one may participate who is regularly employed by an organization in which a group exists, who is in sound health, and under the age of 65 years. Husband or wife may be enrolled under the family contract if the health and age requirements are met; participation is available to children from 3 months to 18 years of age. Monthly rates for the different contracts are as follows:

	SURGICAL SERVICE	HOSPITAL SERVICE	COMBINED COST
Subscriber Only	.80	.65	1.45
Subscriber-Spouse	1.70	1.50	3.20
Subscriber-Family	2.00	1.75	3.75

The subscriber-only contract does not offer benefits for any condition relating to pregnancy. Obstetrical care or care for conditions incidental to or resulting from pregnancy is offered in the subscriber-spouse and subscriber-family contracts after ten months' continuous participation in these contracts.

Benefits available under the Surgical Service Plan will apply in full to subscribers whose income does not exceed the following limits: (a) $2,500 a year for an individual subscriber; (b) $4,500 a year jointly for husband and wife or family. If the income exceeds these limits, the physician and subscriber may agree on a charge for the service rendered. If the charge agreed upon exceeds the amount provided for in the schedule of fees, the physician may bill the subscriber for the difference.

When the plan went into effect, April 1, 814 physicians had agreed to participate. Since then 50 requests to enroll have been received.

The plan represents a major undertaking by the Medical Society. Dr. Frank D. Costenbader, President of Medical Service since it was organized, October 29, 1946, and Theodore Wiprud, Secretary of the Medical Society, have worked diligently and unceasingly for the past three years to bring Medical Service into operation. To share this tremendous task they have had the loyal support of members of the Committee on Medical Care.

In addition to Dr. Costenbader and Mr. Wiprud, who is an ex officio member, the members of the Board of Trustees of Medical Service are: Drs. Sidney C. Cousins, Harry F. Dowling, William P. Herbst, Raymond T. Holden, G. Halsey Hunt (representing USPHS), W. Warren Sager and Maurice A. Selinger; and Mr. Howard Strong (representing the Washington Metropolitan Health Council).

Subscribers to Medical Service will be hospitalized in the following hospitals which are under contract with Group Hospitalization: Casualty, Children's Columbia, Emergency, Episcopal Eye, Ear and Throat, Garfield Memorial, George Washington University, Georgetown University, National Homeopathic, Providence and Sibley Memorial; also Alexandria and Arlington in Virginia; and Leland Memorial, Prince George's and Suburban in Maryland.

DISTRICT OF COLUMBIA HOST TO INTERNATIONAL CONGRESSES IN MAY

The International Congresses on Tropical Medicine and Malaria are meeting in Washington, May 10–18, after an interval of ten years, the last joint meeting having been held in Amsterdam. The Fourth Meeting is sponsored by the Department of State in collaboration with other United States agencies and scientific societies interested in tropical medicine.

Among the nations who have accepted invitations to participate and will send official delegations are: Afghanistan, Australia, Austria, Belgium, Bolivia, Dominican Republic, Ecuador, Egypt, Finland, Haiti, Honduras, India, Iraq, Lebanon, Mexico, Netherlands, New Zealand, Pakistan, Panama, Portugal, Saudi Arabia, Siam, Sweden, South Africa and Venezuela.

Although no formal invitations have been sent to many of the medical, technical and scientific institutions, societies and organizations throughout the world, the Department welcomes all interested professional men and women, including students, to actively participate in the Congresses. Attendance will be registered. With the exception of official delegates of Governments and inter-Governmental organizations, there will be a registration fee of $10 for physicians, scientists and professional persons qualified in tropical medicine. A $5 registration fee will apply to Associates, i.e., students, non-professional persons interested in tropical medicine, and members of families of professional persons.

Meetings will convene in the Departmental Auditorium, Department of Commerce Auditorium, and the Auditorium of the National Museum. Up to four scientific meetings will be held at one time and printed abstracts will be distributed at time of registration. Meeting halls will be provided with the simultaneous interpretation system so that the speeches and papers will be heard without loss of time in any one of the three official languages, English, French and Spanish. Scientific and commercial exhibits will be displayed in the Hall of Nations of the Washington Hotel.

Two special evening sessions in the Departmental Auditorium have been planned. The first, on Wednesday, May 12, will commemorate the demonstration by Walter Reed of the mosquito transmission of yellow fever and will celebrate the placing of his bust in New York University Hall of Fame. The second, on Friday, May 14, will commemorate the fiftieth anniversary of the discovery of the method of malaria transmission by the British malariologist, Sir Ronald Ross.

Tours will be made to the National Institute of Health, the Naval Medical Research Institute, and the Army Medical Department Research and Graduate School. There will be a whole day of demonstrations at the Agricultural Research Center at Beltsville, including the spraying of insecticides from the air. A program of entertainment for the ladies has been arranged.

The Medical Society of the District of Columbia is one of the organizations coöperating with the Department of State in sponsoring the Congresses. It is represented on the Organizing and Entertainment Committees by Dr. William L. Howell. Dr. Tomas Cajigas is chairman of a committee which is arranging for medical service to members of the Congresses by physicians speaking their languages. Appointed by the Medical Society to serve with Dr. Cajigas on this committee are Drs. Howell, Custis Lee Hall, P. S. Constantinople, Henry A. Monat, Victor R. Alfaro, George C. Ruhland, Hayden Kirby-Smith, L. Brison Norris, Eugene A. Forcione and Marcel J. Foret.

Official representatives of the Medical Society will be Drs. Oscar B. Hunter, Roger M. Choisser and Harold J. Jeghers. Dr. Hunter and Dr. Eugene R. Whitmore will represent the American Medical Association at the Congresses.

OPENING OF GW HOSPITAL HISTORIC OCCASION

What Dean Walter A. Bloedorn described as "a doctor's dream come true" was readily attested by those who had the opportunity of previewing George Washington University's new five-million-dollar Hospital, March 19 and 23. The white Indiana limestone structure with its well lighted interior decorated in soft pastels bears no resemblance to the old red brick building at 1339 H Street, N. W.

As Dr. Cloyd Heck Marvin, President of the University, pointed out to visitors, the new hospital has been planned as a teaching hospital and will function as a research center. A large amount of space is therefore devoted to laboratories and research units.

During special ceremonies, March 23, at 4 p.m., the Hospital was officially turned over to the University administrators by Major General Philip B. Fleming, Federal Works Administrator. Two honorary degrees were awarded on this occasion. Dr. Bloedorn, Dean of the Medical School, received the honorary degree of Doctor of Science; General Fleming was honored with the degree of Doctor of Civil Law. Several hundred guests were present. Afterward, the building was inspected by invited alumni, faculty members, and building fund contributors.

The new hospital, rising six stories in height, has been erected opposite historic Washington Circle and occupies a city square. Its main entrance is on 23rd Street, N. W., with the doctors' entrance on 22nd. Its architectural design is the letter "H" to which is affixed at one end a smaller letter "H". It has a bed capacity of 405 adult beds and 72 bassinets, as compared to 90 beds in the old hospital.

Public Buildings Administration of FWA built the hospital at a cost of $3,897,000, with funds furnished under the Lanham Act; medical equipment and furnishings have added $970,000 to the cost. The first patients were admitted to the Hospital on April 1.

All rooms for a specific unit have been grouped together to facilitate coördination. The outpatient department will be located on the first and second floors. The third floor will be used for obstetrics, the fourth and fifth for surgery, and the sixth for psychiatry and neurology services, including treatment for alcoholism.

There are 120 single rooms, 108 two-bed rooms, 10 four-bed wards, and 3 eight-bed wards. The patients' beds are doubly adjustable, easily operated by either the nurse or patient. Irrigation rods are attached to each bed. The 9 operating rooms and 9 delivery rooms, all air conditioned, have terrazo floors which are wired to ground static electricity. The six basic colors used in the decorating scheme were selected for therapeutic purposes by President Marvin. The austere white interiors synonymous with hospitals in the past have given way to walls painted in soft shades of green, grey, rose and yellow.

The new building affords opportunity for a vast expansion of facilities for the Department of Ophthalmology. Without leaving the unit, a resident physician in training can take the patient through the initial examination, supervise the grinding of the lenses, and assist in the final fitting and adjusting of the glasses. The newest methods will be employed in the grinding and fitting shop, and the newest developments in ophthalmic lenses will be available. Contact lenses will be fitted.

George Washington will be one of the few hospitals in the Nation where technicians will be trained in the administering of exercises for crossed and divergent eyes, and for other difficulties which can be corrected by exercise.

The most significant innovation is in the maternity ward on the third floor. Four grades of maternity care will be offered. For some the infant's crib will be placed in its own room within the mother's larger room; for others it will be separated from the mother's room with a glass partition, where the baby can be constantly under the mother's observation. There are also the "cubicle" or "group" nurseries of 4- and 8-crib capacity. The mobile bassinet can be brought into the room and attached to the mother's bed. There is a fully air-conditioned premature nursery with a piped-in oxygen system, and an isolation section for mothers who have contracted communicable diseases.

The Physiotherapy Department will be equipped to teach victims of paralyzing diseases the reuse of their muscles with such instruments as the "progressive resistance" apparatus, the only one available in Washington, which can be minutely regulated to the patient's needs. It also offers diathermy, short-wave, infra-red, ultra-violet, underwater, continuous-flow and whirlpool baths, enductotherm and fever therapy units.

The Radiology Department has a 220,000 volt deep X-ray therapy unit for the treatment of cancer, 2 superficial X-ray therapy units, and 2 radiographic fluoroscopic units for diagnostic purposes, complete with a miniature chest unit attachment for mass X-rays and a laminagraphic accessory unit.

The Washington Circle site of the new hospital is in line with plans dating back to 1928, when it was decided to develop George Washington University in the area between Pennsylvania Avenue, New Hampshire Avenue, F Street, 19th Street and the Potomac River, approximately the area chosen by L'Enfant and Washington for the "College" mentioned in the will of the First President. Many homes, an apartment building, and St. Paul's Episcopal Church, an edifice built 75 years ago, were cleared to make way for construction.

The University has acquired the Everglades Apartment hotel at 2223 H Street, N. W., which will be used to house nurses and other hospital staff members. On the land now occupied by St. Ann's Orphanage, which the University has purchased, it expects to erect a specialized research and treatment unit. Also planned is a parking ramp to accommodate 500 to 600 cars, and a large office building across 23rd Street from the Hospital for the use of physicians and surgeons.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have been received for review:

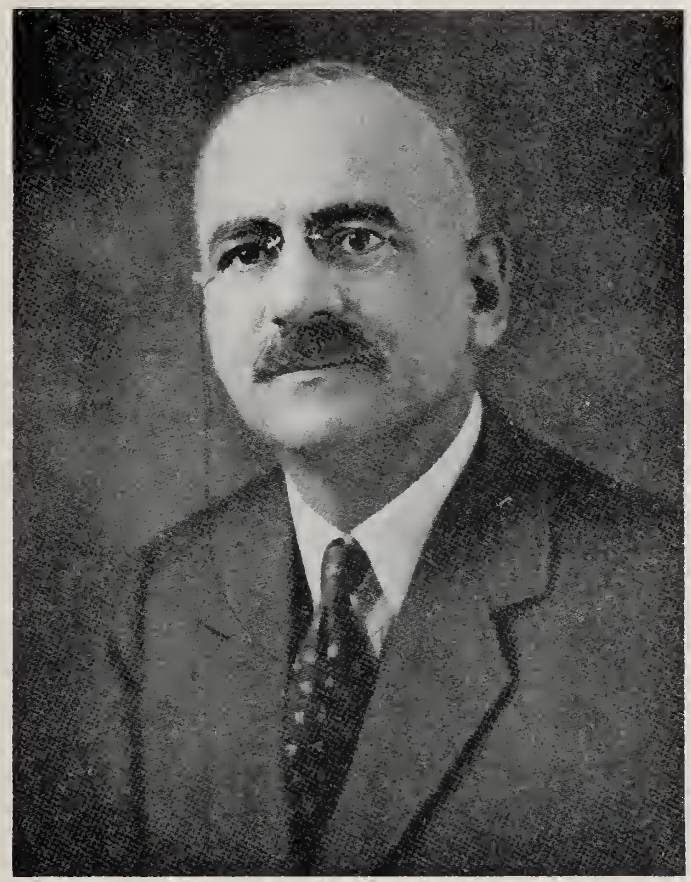
Advances in Military Medicine, vols. 1 and 2, made by American investigators working under the sponsorship of The Committee on Medical Research, Office of Scientific Research and Development, edited by E. C. Andrus, C. S. Keefer, D. W. Bronk, G. A. Carden, Jr., J. S. Lockwood, J. T. Wearn, and M. C. Winternitz; Tuckerman Day, Associate Editor. Pp. 900, with illustrations. Boston: Little, 1948

Treatment in General Practice, 6th ed. Harry Beckman, M.D., Professor of Pharmacology, Marquette University School of Medicine, Milwaukee, Wisconsin. Price, $11.50. Pp. 1129. Philadelphia: Saunders, 1948.

Operative Gynecology, 6th ed. Harry Sturgeon Crossen, M.D., Professor Emeritus of Clinical Gynecology, Washington University School of Medicine; Consulting Gynecologist to the Barnes Hospital, St. Louis Maternity Hospital, St. Luke's Hospital, dePaul Hospital, and Jewish Hospital, and Robert James Crossen, M.D., Assistant Professor of Clinical Gynecology and Obstetrics, Washington University School of Medicine; Assistant Gynecologist and Obstetrician to the Barnes Hospital and the St. Louis Maternity Hospital; Gynecologist to St. Luke's Hospital and dePaul Hospital. Price, $15.00. Pp. 999, with 1,334 illustrations. St. Louis: Mosby, 1948.

Psychobiology and Psychiatry: A Textbook of Normal and Abnormal Human Behavior, 2nd ed. Wendell Muncie, M.D., Practicing Psychiatrist; Chairman, Medical Advisory Board, Seton Institute, Baltimore, Md.; Associate Professor of Psychiatry, Johns Hopkins University; Consultant in Psychiatry, U. S. Veterans Administration. Price, $9.00. Pp. 620, with 70 illustrations. St. Louis: Mosby, 1948.

Washington Physicians of Yesterday



CAT.

WILFRED MASON BARTON, M.D., M.A.

A vivacious personality combined with intellectual ability made "Fred" Barton in his day a popular and outstanding member of the medical profession of Washington, D. C.

Dr. Wilfred Mason Barton was born July 16, 1871, in Washington. From Georgetown University he graduated in medicine in 1892, and in 1925 received the degree of M.A. He spent four years (1891–95) internship in hospitals of Washington and Chicago, and after that for the remainder of his life he was engaged as a general practitioner of medicine and internist in Washington. Later he studied in the clinics of Vienna and Paris

He served as attending physician at Georgetown University Hospital, Columbia Hospital, and Gallinger Hospital. In Georgetown University Medical School he was appointed Professor of Pharmacology and Materia Medica in 1906, and Associate Professor in 1914, and Professor in 1928, of the Theory and Practice of Medicine, serving as such until his death in 1930. He was for a time (1903–) a Medical Inspector of Public Schools of the District of Columbia.

Dr. Barton was an active and useful member of the Medical Society of the District of Columbia, rendering much ervice on its Executive and other committees. He was President of the Society in 1911; and during his incumbency of this office, on July 10, 1911, was effected the amalgamation of the previous separate Medical Society and Medical Association of the District. Of the 81 presidents which the Medical Society proper (not including the old Associa-

(Continued on page 256)

News and Personals

The American Physiotherapy Association will convene for its annual conference at the La Salle Hotel, Chicago, May 23–28.

The National Gastroenterological Association will hold its 13th Scientific Session at the Hotel Pennsylvania in New York City, June 7–10. A copy of the program may be obtained by writing to the Secretary of the Association at 1819 Broadway, New York 23, N. Y.

The Fourteenth Annual Meeting of the American College of Chest Physicians will be held at the Congress Hotel, Chicago, June 17–20.

On June 17, the first day of the meeting, the Board of Examiners of the College will conduct oral and written examinations for fellowship. Candidates for fellowship should contact the Executive Secretary, American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Ill.

Course No. 5 on Internal Medicine sponsored by the **American College of Physicians** will open at Gallinger Municipal Hospital, May 17 and continue for a week. The course will be directed by Dr. Wallace M. Yater, Governor of the College.

Officers of instruction will include the Program Committee, consisting of Dr. Yater, Colonel Charles R. Mueller, Drs. Thomas McP. Brown, Hugh H. Hussey, Jr., James J. Griffitts and Walter K. Myers, and many physicians from Washington and vicinity. Members of the District Medical Society who will appear on the program are:

Drs. Theodore J. Abernethy, Louis K. Alpert, Joseph M. Barker, E. E. Barksdale, Brian Blades, Lester S. Blumenthal, Irving B. Brick, Ralph M. Caulk, Murray M. Copeland, Edgar Davis, Harry F. Dowling, Henry D. Ecker, Clayton B. Ethridge, James J. Feffer, Jerome Frank, Maurice Friedman, Charles F. Geschickter, James N. Greear, Jr., Roy Hertz, Harold L. Hirsh, Paul F. Jaquet, Harold Jeghers, Sol Katz, Thomas F. Keliher, Calvin T. Klopp, William S. McCune, T. Tayloe Perry III, Andrew G. Prandoni, John A. Reisinger, Monroe J. Romansky, Hilbert S. Sabin, Robert Stolar, Lewis K. Sweet, Lawrence J. Thomas, J. Ross Veal, Bernard J. Walsh, Jacob J. Weinstein, Charles Stanley White, Vincent T. Young.

CALENDAR OF MEETINGS

March 1	Committee on Medical Care in Public Institutions
March 2	Program Committee for 19th Annual Scientific Assembly
March 3	Special Business Meeting of Society
March 6	Washington School of Psychiatry
March 8	First Postgraduate Lecture on Clinical Application of the Basic Sciences Washington Orthopedic Club
March 9	Registered X-ray Technicians of Washington
March 10	Scientific Meeting of Society Board of Trustees, Medical Service Woman's Auxiliary
March 13	Washington Psychoanalytical Society
March 15	Second Postgraduate Lecture on Clinical Application of the Basic Sciences
March 16	D. C. Medical Technicians
March 17	Committee on Medical Care
March 18	Graduate Nurses' Association
March 19	Board of Censors Section on Anesthesia
March 22	Third Postgraduate Lecture on Clinical Application of the Basic Sciences
March 23	Section on General Practice Washington Diabetes Association
March 24	Scientific Meeting of Society Washington Gynecological Society
March 25	Membership Committee Washington Diabetes Association Washington Society for Advancement of Psychotherapy
March 26	Classification Committee
March 29	Executive Board Association of Undergraduate and Practical Nurses of D. C.
March 30	Program Committee, A.S.A.

From the USPHS there will be Drs. Morris K. Barrett, Federick J. Brady, W. Clark Cooper, John E. Dunn, Harry Eagle, Nathan B. Eddy, Lloyd D. Felton, Karl Habel, J. R. Heller, Carl L. Larson, Byron J. Olson, W. H. Sebrell, Charles C. Shepard and Norman H. Topping; from the Veterans Administration: Drs. Andrew J. Brennan, Ira Gore, Albert D. Kistin and William R. Merchant; from Walter Reed Hospital:

Major Thomas A. Heidicke, Captain Robert A. Muilinberg, Colonel James S. Taylor, Captain Acors W. Thompson and Lt. Colonel Joseph R. Vivas; from the Food and Drug Administration: Dr. William A. Randall and Dr. Henry Welch; from the Bureau of Medicine and Surgery: Comdr. Robert O. Canada.

Also appearing on the program will be Dr. Mary A. Engle, of Johns Hopkins Hospital, Baltimore; Lt. Colonel Arthur P. Long, M.C., U. S. Army; Dr. Irvine H. Page, of the Cleveland (Ohio) Clinic Foundation; Dr. Porter Vinson, of the Medical College of Virginia, Richmond; Dr. J. Edwin Wood, Jr., of the University of Virginia Department of Medicine, Charlottesville; Dr. Irving S. Wright, of Cornell University Medical College, New York; and Dr. Hyman J. Zimmerman, of George Washington Medical Division, Gallinger Municipal Hospital.

The Medical Society's new **Section on Radiology** elected officers at its meeting in the Society's Library, February 26, They are as follows:

Dr. Ralph M. Chaulk, *Chairman;* Dr. Joseph F. Belair, *Vice Chairman;* Dr. Alfred A. J. Den, *Secretary-Treasurer.*

The Section is planning to revive the Midwinter Conference of Eastern Radiologists, which was suspended during the War, and hopes to have it in Washington during the spring of 1949.

The next meeting of the Section will be held on April 29, at 8 p.m., in the Medical Society's auditorium.

The Silver Spring Academy of Medicine will close its series of meetings, May 1, with a dinner at the Army and Navy Club. Wives of members will be present as guests of the Academy.

The regular meeting of the **Society of Registered X-ray Technicians** will be held, May 11, at 8 p.m. in the Medical Society's Library. Dr. Isidore Lattman, radiologist, will be the guest speaker. All members are urged to be present and visitors are cordially invited to attend.

At the meeting of the **Executive Board** February 23, approval was given to the members appointed by President Holden who will comprise the new Committee on Medical Care in Public Institutions: Dr. Maurice A. Selinger, *Chairman;* Drs. A. Clagett Gray, James N. Greear, Jr., Carolyn H. S. Pincock and J. Ross Veal.

Dr. Robert J. Coffey was appointed to succeed himself as Delegate to the Interprofessional Conference of the District of Columbia.

At this meeting the President was authorized to appoint a committee which shall be instructed to carry out the projects proposed by Dr. William L. Howell, in coöperation with the Fourth International Congresses on Tropical Medicine and Malaria, to be held in Washington, May 10–18. The following members of the Society have been invited to serve on this Committee: Dr. Tomas Cajigas, Chairman; Drs. Custis Lee Hall, P. S. Constantinople, Henry A. Monat, Victor R. Alfaro, George C. Ruhland, Hayden Kirby-Smith, Leo Brison Norris, Eugene A. Forcione and Marcel J. Foret.

Dr. Howell, the Society's representative on the Organizing Committee of the Congresses, will serve as Vice Chairman of the coöperating committee.

Veterans taking internship and residency training under the Servicemen's Readjustment Act (G. I. Bill) and the Vocational Rehabilitation Act (Public Law 16) are not entitled to increased subsistence allowances authorized under a recently enacted law. according to an announcement released by Veterans Administration, February 25. The higher rates are available only to veterans in schools, colleges and universities pursuing full-time courses of education. Interns and residency trainees will continue to receive subsistence payments at the old rates of $65 a month for those without dependents and $90 for those with dependents. The new rates for full-time veteran-students are $75 a month for a veteran without dependents, $105 for a veteran with one dependent, and $120 for a veteran with more than one dependent.

The Section on the General Practice of Medicine met in the Medical Society's building, March 23. Two papers were presented at this meeting: "The Role of the General Practitioner in Modern Medicine," Rear Admiral H. L. Pugh, Deputy Assistant Chief of Medicine and Surgery, U. S. Navy; "Signs of Surgical Importance," Dr. Paul C. Kiernan, Associate Professor of Surgery, Georgetown University School of Medicine.

George Washington University Medical Society dedicated its twenty-second annual alumni reunion and banquet, which was held in the Mayflower Hotel, February 28, to the general practitioner. The principal speaker was the Honorable Clinton P. Anderson, Secretary of Agriculture. Dr. R. Lee

Spire, Chairman of the Medical Society's Section on General Practice, gave an account of his 42 years' experience as a general practitioner. Presiding at the banquet was Dr. Clyde P. Reeves, President of the Society.

Dr. Harry F. Dowling was awarded a scroll and $100 in cash, the Society's first postwar award, for outstanding research in infectious diseases. Presentation was made by Dr. Roger M. Choisser, Chairman of the Committee on Awards.

Among those who attended as guests of the Society were Dr. Raymond T. Holden and Theodore Wiprud, President and Secretary, respectively, of the Medical Society.

The Committee on Postgraduate Education reported good attendance at the **Postgraduate Lectures on the Clinical Application of the Basic Sciences,** which were held on three successive Monday evenings, March 8, 15 and 22. A total of 279 physicians registered during the course, of which 85 were residents and interns, and 23 medical students.

Those who attended bespoke the excellence of both the subject matter and the speakers. The program was as follows:

March 8—"Pharmacological Basis for the Selection of a Drug Preparation," Harry Gold, M.D., Associate Professor of Pharmacology, Cornell University Medical College
March 15—"The Physiology of Gastric Secretion: A Basis for Vagotomy in the Treatment of Peptic Ulcer," Lester R. Dragstedt, M.D., Professor of Surgery, University of Chicago
March 22—"Physiologic Activities of the Liver," Frank C. Mann, M.D., Director, Institute of Experimental Medicine, Mayo Foundation

Dr. Oscar H. Fulcher and his Committee members, Drs. Z. M. Lebensohn, Brian B. Blades, Alva D. Daughton, Leslie H. French, Maurice H. Friedman, Oscar B. Hunter, Sr., Ralph M. LeComte, Lee McCarthy, Stephen W. Nealon, Jr., Charles W. Ordman, Marshall DeG. Ruffin and Francis D. Threadgill, were responsible for making this instructive course available to Washington physicians.

The Section on Neurology and Psychiatry met in the Society's Library, February 5. Dr. Othmar Solnitzky read a paper on "The Clinical Anatomy of the Visual System."

The Washington Society for the Advancement of Psychotherapy, Inc. met in the Society's Library, March 25. A Symposium on Insomnia: Psychogenesis and Psychotherapy was presented, in which the following speakers participated: Drs. L. Gilman, L. E. Wexberg, B. Karpman, L. S. London, P. Litvin, F. S. Caprio and V. Ujhely. Discussion was led by Drs. Leo Kanner and Jacob Conn, of Johns Hopkins University Medical School, and by Dr. F. R. Riessenmann, of St. Elizabeths Hospital.

The Lay Society of the Diabetes Association of the District of Columbia, organized for the purpose of furthering the education of the diabetic, is establishing a free mail "Question and Answer Service" limited to its own membership. Members will be notified of this service, and questions regarding diet, insulin dosage and the story of diabetes will be solicited. A panel of physicians, expert in the management of diabetes, will answer the questions. No answers will contain the names of physicians but will be signed, The Diabetes Association of the District of Columbia. In no instance will there be interference of any kind with physician's treatment of diabetes and on every answer sheet there will be the statement, "Always consult your physician."

The Diabetes Association hopes that all physicians in Washington who are treating diabetic patients will coöperate in this undertaking. Any assistance the Association can give physicians whose patients are members of the Lay Society will be gladly rendered.

The Lay Society, in coöperation with the D. C. Dietetic Association, sponsored a very successful meeting for diabetics, March 10, in the auditorium of the Federal Security Administration Building. The program, "Diet and the Diabetic," consisted of short talks on the basic principles of the diabetic diet, and on carbohydrates, proteins, fats and measurements used in diabetic diets.

Following the talks, the 600 diabetics who attended were shown an exhibit of basic diabetic diets, containing 2,000 calories in bulk and concentrated form, and displays of carbohydrates, proteins and fats with various substitutes for these kinds of food. This was the first display of its kind in the city of Washington and was well received by those in attendance.

Dr. Charles P. Howze was host to the **Clinico-Pathological Society,** March 16, at his home in McLean, Virginia. Dr. Thomas Bradley presented a paper on "Physiology of Abdominal Pain."

Members of the **Jacobi Society** heard an address by Dr. Alan F. Guttmacher, Associate Professor of Obstetrics, Johns Hopkins University School of Medicine, March 15. The meeting was held at the Washington Hotel.

At a meeting of the **Women's Medical Society,** March 2, in the Solarium of Doctors Hospital, each member presented briefly an analysis of her most interesting case.

The Metropolitan Health Officers' Association held its regular monthly luncheon meeting at the Washington Golf and Country Club, March 9. Discussion concerned the mass chest X-ray program now in progress in Maryland, Virginia and the District of Columbia. Among the speakers were the heads of tuberculosis control divisions in their respective territories: Dr. A. B. Coulter, District of Columbia; Dr. William Wagner, Virginia; and Dr. John Byers, Maryland. Remarks were also made by Mr. E. K. Funkhouser, of the D. C. Tuberculosis Association, and Mr. A. T. Lundberg, County Manager of Arlington.

Georgetown University has announced receipt of a $50,000 gift from Mrs. Mabel C. Hinshaw, in memory of her husband, the late William Wade Hinshaw, who lived in Washington for a number of years after retiring from his musical career in 1926. The money will be used to set up an intensive cancer research project at the new hospital. It will permit the establishment of a four-bed ward where cancer patients can be studied.

Several members of the District Medical Society took part in the **Dental Society's five-day post-graduate clinic** at the Shoreham Hotel, March 14–18. Dr. Sterling V. Mead, Past President of the American Dental Association, participated in two panel discussions on the opening day: one on Social Trends in Dentistry and the other, The Function of the Dentist as a Citizen. During the former, Dr. Mead endorsed the program of Federal aid for dental research proposed by Senator Robert A. Taft of Ohio. Senator Taft's statement, which was read to the panel by Representative Forest A. Harness of Indiana, also advocated Federal assistance to states and local communities to provide free dental care for children who cannot pay for it.

Other panel participants from the Medical Society were Dr. R. Lyman Sexton, on Nutrition; Dr. William S. Anderson, on Looking Forward to Tomorrow's Practice; and Drs. William L. Howell and Harold L. Hirsh, in a Medical-Dental Symposium. Dr. Ralph Morrison gave a clinic presentation on "The Laws of Physics and Engineering Applied to Dentistry."

Dr. Milton C. Cobey, Associate Professor of Orthopedics at Georgetown University School of Medicine, and Dr. Edmund Horgan of Winchester, Va., formerly a member of the District Medical Society, together with Dr. Sam A. Overstreet, of the faculty of the University of Louisville, Kentucky, left March 23 for a five-week tour of Japan and Korea. They comprised the first Pacific team of civilian medical consultants selected to visit United States Army hospitals in the Pacific area. Several similar groups are being established by the Army Medical Department to facilitate advanced professional training of Army doctors overseas. The civilian specialists are all associated with United States medical colleges, and are recognized authorities in their specialties. The purpose of the visits is to give patients in U. S. overseas hospitals the benefit of this country's finest medical talent.

Dr. Seymour J. Rosenberg, Associate Professor of Psychiatry at Georgetown University School of Medicine and Chief of Georgetown's Mental Hygiene Clinic, has just returned from Europe, where he spent six weeks on a similar mission. His associates were Dr. Alexander Marble, of Harvard Medical School, and Dr. Frederick C. Bost, of the University of California.

Colonel Frank E. Hamilton, Chief of Surgical Service of Walter Reed General Hospital, is in Europe at the present time with Dr. Harold Scheie, of the University of Pennsylvania, Dr. Benjamin Balser, of Columbia, and Dr. Burgess L. Gordon, of Jefferson Medical College.

Dr. Daniel Blain resigned his position as Chief of Neuropsychiatric Services for Veterans Administration in order to accept the newly established position of Medical Director of the American Psychiatric Association. The position has been created to provide the full-time services of a medical man who will act for the Association as an authorized source of information and advice.

Dr. Blain will continue to reside in Washington. His office is located at 1624 Eye Street, N.W. Mr. Austin M. Davies, Executive Secretary of the APA, will maintain the present offices at 9 Rockefeller Plaza, New York 20, N. Y.

Dr. Harvey J. Tompkins, who has served the Veterans Administration since 1945 as Assistant Chief of Neuropsychiatric Services and Chief of the Hospital Section, succeeds Dr. Daniel Blain. Dr. Tompkins is Associate Professor of Psychiatry at Georgetown University School of Medicine.

All members of **Veterans Administration national advisory group on medical problems** have accepted reappointment by Carl R. Gray, Jr., Administrator. This group, which includes **Dr. Arthur C. Christie** of Washington, acts in an advisory capacity to the Administrator and to Dr. Paul B. Magnuson, Chief of VA's Department of Medicine and Surgery, on over-all policies concerning medical service to veterans. This group was appointed by General Omar N. Bradley. Chairman of the group, which met in Washington, March 22, is Dr. Charles W. Mayo, of the Mayo Clinic, Rochester, Minn.

At the annual meeting of the **Hospital Council of the National Capital Area,** February 19, William R. Castle, President of Garfield Memorial Hospital, was reëlected President; J. G. Capossela, of Emergency Hospital, was elected Vice President; Sister Marie, of Providence, Secretary; and Van C. Adams, of Alexandria, Treasurer.

Colonel N. L. McDiarmid, Superintendent of Columbia, and Henry P. Blair, Vice President of Episcopal, were reëlected to the Executive Committee for three-year terms. New members elected to the Committee were the Rev. Paul A. McNally, Dean of Georgetown University School of Medicine, and A. B. Cook, Superintendent of Garfield.

Dr. Edward J. Beattie, Jr., who came to Washington last September as Clinical Instructor in Surgery at George Washington University School of Medicine, is one of 16 young doctors who will share in scholarship grants offered by the John and Mary R. Markle Foundation of New York. George Washington University will receive $25,000, payable at the rate of $5,000 yearly, to help Dr. Beattie continue his training for the next five years in the fields of surgery and cardio-respiratory physiology. Dr. Beattie was born in Philadelphia; he received his B. A. degree from Princeton in 1939, and his degree in medicine from Harvard Medical School in 1943.

The Federal Security Agency announces the appointment of **Dr. Samuel M. Wishik** to the Children's Bureau, where he will direct the planning work connected with the Bureau's program of grants-in-aid to the states for maternal and child health, and for crippled children's services. Dr. Wishik comes to the Children's Bureau from the New York City Health Department, where he headed its division of physically handicapped children. He is filling the post recently vacated by Dr. Abram L. Van Horn, who resigned to direct the Kate Macy Ladd Fund in Newark, N. J., which was established to provide medical care for convalescents.

Dr. Walter R. Stokes, Chairman of the Society's Committee on Public Relations, arranged for two members to speak before the Brightwood Lions Club. On March 3, **Dr. Edward J. Stieglitz** gave a talk on "The Meaning of Age," and on March 10, **Dr. Fred A. J. Geier** discussed "Certain Aspects of Cancer."

Dr. William S. Derrick, who has been appointed Anesthesiologist in Chief at the Peter Bent Brigham Hospital, Boston, assumed his new duties, April 1. Dr. Derrick graduated from George Washington University School of Medicine in 1943 and completed a fellowship in anesthesiology at the University Hospital.

Dr. Joseph E. Brackley has informed the Secretary of the District Medical Society that he is now Chief of Internal Medicine at the Kern General Hospital at Bakersfield, California. Dr. Brackley moved to California from Big Spring, Texas, where he was associated with the Cowper-Sanders Clinic Hospital.

Drs. Edgar M. McPeak, Harold Jeghers and Thomas M. Peery are coöperating in the programs of

Professional Staff Proceedings at Walter Reed Hospital. **Dr. Robert F. Dow,** who recently became an Active member of the Medical Society, has participated in the programs since their inception in 1946.

Dr. Gordon M. Smith resigned his position as physician in charge of the Rapid Treatment Center at Gallinger Municipal Hospital to become associated in the general practice of medicine with Drs. W. Robert Perkins, Jr. and Leland S. Madden at 1463 Rhode Island Avenue, N.W.

Captain Montgomery A. Higgins, M.C., U.S.N. (retired), has been appointed Director of Education for the District Division of the American Cancer Society. The announcement was made by Dr. Harry S. Kerr, President of the local Cancer Division, on February 21. Dr. Higgins graduated from George Washington University School of Medicine in 1904 and later did graduate work in Vienna, Paris and London before receiving an appointment as Assistant Surgeon in the U. S. Navy in 1907.

Dr. Walter Freeman addressed the monthly medical meeting of the Army Medical Department in the Sternberg Auditorium, March 18. His subject was "Psychosurgery."

Dr. Wallace M. Yater delivered the address at the annual banquet of Alpha Omega Alpha Fraternity of the University of Ohio, at Columbus, March 5.

Dr. Aubrey O. Hampton gave an address on "The Role of Radiology in Early Diagnosis of Cancer" before physicians who attended the Symposium on Malignant Growths, March 22 to 27, sponsored by the Medical College of Virginia at Richmond.

President Raymond T. Holden addressed the graduating nurses of **Doctors Hospital,** February 22, following which certificates were awarded to the fourteen members of the class by Dr. Edgar A. Bocock, Administrator of the Hospital.

Theodore Wiprud addressed the Annual Secretaries' Conference of the West Virginia State Medical Association in Charleston, March 14. His subject was "Planning Medical Society Programs."

Dr. Irvin Hantman has returned from New York where he studied endaural surgery under Dr. Julius Lempert.

Dr. Everett J. Gordon has recently been certified by the American Board of Orthopedic Surgery.

Karl H. York, Superintendent of **Arlington Hospital** since December, 1944, submitted his resignation, effective May 1, to the Executive Committee of the Board of Trustees on March 12. He will take a similar post at St. Luke's Hospital, Racine, Wisconsin.

Miss Lois Hope Holiman will be Director of Nursing at **George Washington University's new hospital.** Miss Holiman was formerly associated with the Wesley Memorial Hospital School of Nursing in Chicago, which is affiliated with Northwestern University. She is a graduate of Indiana University School of Nursing and holds a master's degree in nursing education from Columbia University.

MEMBERSHIP

The following applicants for membership were duly elected to membership at the meeting of the Executive Board, March 29, 1948, in accord with the Amendment XI, Section 2, of the Constitution and By-laws of the Society:

Active Members

Harry E. Altman, 1466 Columbia Road, N.W.
Isabelle Blum, 4525 Garrison Street, N.W.
Rollin F. Bunch, Garfield Hospital
Henry H. Canton, 2910 10th Street, N.E.
Joseph V. Casella, 2650 Wisconsin Avenue, N.W.
Robert D. Cawley, 6418 33rd Street, N.W.
Francis J. Crilley, Jr., 2901 South Dakota Avenue, N.E.
James A. Gannon, Jr., 1617 35th Street, N.W.
Jason Geiger, 2321 Lincoln Road, N.E.
Herbert M. Giffin, 1801 K Street, N.W.
Anson R. Hyde, 2833 South Columbus Street, Arlington, Va.
Richard E. Lukes, 1020 19th Street, N.W.
Hubert F. Manuzak, 2633 16th Street, N.W.
Barbara Moulton, 3700 Oliver Street, N.W.
Marshall M. Parks, 1605 22nd Street, N.W.
Manson B. Pettit, St. Elizabeths Hospital
Ruell Allen Sloan, Army Institute of Pathology
William Tenenblatt, 1328 Eye Street, N.W.
Milton F. Weingarten, 1726 M Street, N.W.
Gerald Wessler, 4109 Gallatin Street, Hyattsville, Md.
Herman S. Wigodsky, 1727 Massachusetts Avenue, N.W

Associate Members

Stanton S. Hoechstetter, 44 Dellwood Road, Worcester, Mass.
Harry A. Horstmann, Jr., Walter Reed Hospital
Benjamin S. Miller, 3824 34th Street, Mt. Rainier, Md.
Albert Roth, Annapolis Road, Lanham, Md.
Harvey J. Tompkins, 4647 South 30th Road, Arlington, Va.
Aaron H. Traum, 524 Ritchie Avenue, Silver Spring, Md.

The following applicants for membership will be voted on at the meeting of the Executive Board, May 24, 1948:

For Active Membership

Willy Edward Baensch, University of Halle, Germany—1919
Herbert G. Brandes, University of Maryland—1944
Michael L. Buckley, George Washington University—1940
Robert N. Coale, George Washington University—1943
John Peter D'Angelo, Georgetown University—1945
John Bernard Fegan, George Washington University—1943
Charles F. Finley, George Washington University—1939
Bernard A. Fitzgerald, Georgetown University—1944
Jack Kleh, George Washington University—1944
Laurence H. Kyle, Boston University—1941
Earl Hick Mitchell, Jr., Indiana University—1943
Edward James Mortell, University of Wisconsin—1943
James M. Moser, Jr., Georgetown University—1943
Arthur B. Rosenbaum, New York University—1935
William W. Stanbro, Washington University (St. Louis)—1938
Leon Yochelson, University of Buffalo—1942
Paul Edward Zehfuss, University of Pittsburgh—1934
Hyman J. Zimmerman, Stanford University—1942

For Associate Membership

Joseph James Kaveney, Georgetown University—1904
Fernando Rene Leyva, Havana Medical School—1943
Sterling Garrett Mead, D.D.S., Georgetown University—1944
Harold T. Yates, University of Virginia—1941

Recent changes in membership status:

Active to Associate

John R. Cain
Thomas A. N. Hindman
George Kriegman
Robert L. Roy

Resigned
Active

Beatrice B. Berle
John F. Donohue
Leonard Gilman
Herman Kabat
Irwin H. Kaiser
Herman E. Kittredge
Henry T. Kulesher

Resigned
Associate

Charles T. Bassett
Delmer J. Brown
Marion Brown
Louis E. Daily
Frank B. C. Geibel
Philip W. Huntington
George W. McCoy
Jonathan Zoole

MEETINGS

Wednesday, May 5

ANNUAL BUSINESS MEETING

Wednesday, May 12

Scientific program will be presented by the *Section on Pediatrics;* speakers and subjects to be announced.

Wednesday, May 19

The Section on Pathology and Laboratory Medicine will furnish the program; speakers and subjects to be announced.

CORRESPONDENCE

WASHINGTON, D. C., March 6, 1948

THE HONORABLE GUY MASON
BOARD OF COMMISSIONERS
DISTRICT OF COLUMBIA
13TH AND PENNSYLVANIA AVENUE, N. W.
WASHINGTON, D. C.

MY DEAR COMMISSIONER MASON:

The Executive Board of the Medical Society of the District of Columbia has been deeply perturbed by the inadequacies said to exist at Gallinger Hospital. Recent developments led it to establish a Committee on Medical Care in Public Institutions for the purpose of making an objective study of District institutions and the medical care provided their inmates.

Appointments to this Committee have been made after careful consideration of the qualifications of each member. Dr. Maurice A. Selinger has been chosen Chairman, and members are Drs. James N. Greear, A. Clagett Gray, J. Ross Veal, and Carolyn Pincock.

The Committee, having been confirmed, is now ready to begin its task. There will be no publicity in connection with its activities. Its recommendations will be submitted to the Executive Board which will refer them to the Society if they involve matters of public policy. In any event, when action is taken on the Committee's recommendations, a communication will be directed to you for the consideration of the District Commissioners.

The sole object of our Society in this undertaking is to fulfill its obligations to the community. Certainly physicians should be in the best position to give sound advice as to what constitutes proper health safeguards and adequate medical care.

Yours truly,
Raymond T. Holden, M.D.
President, The Medical Society of the District of Columbia

Washington, D. C., March 8, 1948

Dr. Raymond T. Holden
President, The Medical Society of the
District of Columbia
1718 M Street, Northwest
Washington, D. C.

Dear Doctor:

This acknowledges receipt of your letter of March 6th, in which you advise that the Executive Board of the Medical Society of the District of Columbia has been deeply perturbed by the inadequacies said to exist at Gallinger Hospital, and that recent developments led it to establish a Committee on Medical Care in Public Institutions for the purpose of making an objective study of District institutions and the medical care provided their inmates. I am very happy to know that the Society has taken this step.

Recently Dr. Ruhland sent you a communication in which he gave a lead to some of the problems involved. I am in hopes the Committee will very carefully go into all the details the leads indicate necessary, because the Commissioners wish an objective study.

We have an investment of nearly $9,000,000 in Gallinger Municipal Hospital; also, the Commissioners feel that it is no crime to be poor, and that indigents should receive the best medical care possible under our system of Government, particularly if we wish to maintain this system, which we do.

To the end that the Committee may have all the facts and history, I am sending herewith copy of a memorandum addressed to Mr. Sanderson, Director of the Hospital Permit Bureau, from Mrs. Hannah S. Norman, Supervisor of Medical Social Workers employed by the District of Columbia. You will note this letter is dated February 16th and covers recent exposés of alleged inadequacies.

With thanks and all good wishes,

Sincerely yours,
Guy Mason
Commissioner, District of Columbia

Washington, D. C., March 4, 1948

Dr. Raymond T. Holden
President, The Medical Society of the
District of Columbia
1718 M Street, N. W.
Washington, D. C.

Dear Doctor Holden:

The unfortunate publicity which for quite some time now has again centered on Gallinger Hospital naturally has had a very disturbing effect on the patients, employees, and the public in general. While I welcome constructive criticism, I feel that much of the publicity that has been levelled at Gallinger recently has not been constructive, has not been useful, but has been entirely destructive. We who are finally responsible for Gallinger Hospital are quite aware of the needs and shortcomings in the service of that institution. Through the years we have presented our requests for needed additions to the buildings, as well as other improvements; also personnel and equipment.

The most recent publicity, in which some members of our profession, specifically, Dr. C. F. Geschickter, pathologist of Georgetown, Dr. Robert J. Coffey, head of the Department of Surgery, Georgetown, and Dr. Brian Blades, holding a similar position with George Washington, are illustrative of the type of criticism that is not constructive and we feel rather keenly that whatever criticism these men may have felt was necessary should have been presented to the officials responsible for the institution, rather than to have been presented in a sensational manner to the press.

I feel that now the Medical Society, as representing medical practice in this community, can be of definite service and this letter is addressed to you in the hope that the Society may be willing to appoint a committee to investigate Gallinger Hospital on the following points:

1. The needs of the institution as a physical plant and here the report should include an investigation of the record of the responsible officers, whether they are aware of these needs and have presented them to proper Governmental agencies.

2. The quality of service. Is the quality of service inferior to that of other hospitals in this community?

3. The cost of operating the hospital. This should be also on a comparative basis, preferably with institutions responsible for similar service.

4. Is the set-up of divided authority in the management of the institution desirable and, if not, how can it best be resolved? This latter question should, manifestly, explore the question whether a Governmental agency, held responsible by the public for the care of the

indigent sick, should delegate this responsibility to an agency that cannot be so held responsible.

Inasmuch as all of these questions undoubtedly will be considered by the Committees of the Congress dealing with District affairs, it would be very desirable if your committee could have its report ready so that it could be presented to the Congressional Committees at the time of budget considerations for the District.

Very sincerely,
George C. Ruhland, M.D.
Health Officer, District of Columbia

Washington, D. C., March 8, 1948

Dr. George C. Ruhland
District of Columbia Health Officer
300 Indiana Avenue, N.W.
Washington, D. C.

Dear Dr. Ruhland:

This is in reply to your letter of March 4 which I received on March 8 and in which you have suggested that a committee of the Medical Society be formed to investigate conditions at Gallinger Hospital.

Apparently you are unaware that several weeks ago, a Committee on Medical Care in Public Institutions in the District of Columbia was formed by our Society. This Committee was given the following assignments: to visit any or all District institutions and to report directly to the Executive Board of the Society on the physical condition of the institutions and on the medical care provided their inmates.

In view of the fact that such a Committee as you have suggested already exists, I am referring your letter to them with the recommendation that they give the investigation of Gallinger Hospital priority in their plans.

It is the wish of the Medical Society, through the special knowledge and training of its members, to assist in obtaining the best medical care for inmates of public institutions throughout the District and the most judicious expenditure of the tax-payers' money.

You will be advised of any action taken by the Society.

Yours truly,
Raymond T. Holden, M.D.
President, The Medical Society of the District of Columbia

BOOK REVIEWS

The Foot and Ankle: Their Injuries, Diseases, Deformities and Disabilities, 3rd ed. Philip Lewin, M.D., F.A.C.S., Associate Professor of Bone and Joint Surgery, and Acting Head of Department, Northwestern University Medical School; Professor of Orthopaedic Surgery, Post-Graduate Medical School of Cook County Hospital; Attending Orthopaedic Surgeon, Cook County Hospital; Senior Attending Orthopaedic Surgeon, Michael Reese Hospital; Consulting Orthopaedic Surgeon, Municipal Contagious Disease Hospital, Chicago; formerly Colonel, Medical Corps, Army of the United States. Pp. 847, with 389 illustrations. Line drawings by Harold Laufman, M.D., F.A.C.S., Associate in Surgery, Northwestern University Medical School; formerly Major, Medical Corps, Army of the United States. Price, $11.00. Philadelphia: Lea & Febiger, 1947.

Dr. Lewin's third edition of "The Foot and Ankle" is approximately 180 pages larger than the previous editions and contains approximately 100 more illustrations. These additions make the book practically encyclopedic in scope. As such, it is definitely of value to every type physician from obstetrician to orthopedist. No one disputes the necessity for careful diagnosis and treatment of conditions of the hands; however, many unqualified people ranging from shoe salesmen to orthopedic surgeons diagnose and treat diseases and abnormal conditions of the feet. Lewin's book makes us realize that the feet should be in the same category as the hands. The 847 pages of "The Foot and Ankle" make it very clear that there are numerous other conditions besides the old standbys, pes planus, metatarsal varus and metatarsalgia, which can cause foot pain.

This third edition treats with the etiology, diagnosis and treatment of every type of foot and ankle disorder. Knowledge gained from the military service concerning compound fractures, crushing wounds, osteomyelitis, traumatic gangrene and amputations has been added in this edition. The section on congenital deformities is excellent as a guide to further reading. There are also sections on peripheral vascular lesions, metabolic lesions, and tumors, which tend to bring to mind things that we do not ordinarily consider involving the foot and ankle.

The material is fairly well organized and reading is easy. The small boxed-in summaries make for quick and simple review. There is a 15-page bibliography, a complete table of contents, and a very adequate index.

A. B. Rohrbaugh, Jr., M.D.

Diseases of the Chest: with Emphasis on X-ray Diagnosis. Eli H. Rubin, M.D., F.A.C.P., F.C.C.P., Attending Physician, Division of Pulmonary Diseases, Montefiore Hospital and Country Sanatorium, New York; Visiting Physician in Tuberculosis and Physician-in-charge, Chest Clinic, Morrisania City Hospital, New York, including a section on The Principles of Surgical Treatment by Morris Rubin, B.A., M.D., Assistant Visiting Surgeon, Triboro Hospital and

Morrisania City Hospital, New York; formerly Chief, Thoracic Surgical Section, Sixty-ninth General Hospital, Assam, India. Price, $12.00. Pp. 685, with 355 illustrations, including 24 plates in color. Philadelphia: Saunders 1947.

This book is well organized and well written. It is up to date and replete with reproductions of roentgenograms and illustrative case summaries. Although the title stresses X-ray diagnosis, rather complete discussions of the various diseases of the bronchi, lungs, pleura and mediastinum are given. Numerous references to the literature are given in the text. All sections seem to be equally good. The book should be possessed by every internist.

W. M. Y.

THOMAS EDWIN NEILL, M.D., F.A.C.S.
(1879–1948)

Dr. Thomas E. Neill, Past President of the District Medical Society, died February 22, 1948, at Garfield Memorial Hospital following a brief illness. He was a well known gynecologist and a familiar figure at medical gatherings, having practiced medicine in Washington for nearly forty years.

Dr. Neill was born in Loudoun County, Virginia, January 22, 1879, the son of Daingerfield Fauntleroy and Mary Francis Neill. His father served during the War between the States with the Confederate Army as a member of the Sixth Virginia Cavalry.

Until he was eighteen years of age he lived on a farm in Virginia and attended the county schools of that state. He enrolled for the study of medicine at Georgetown University School of Medicine, receiving his degree in 1908. After interning at Georgetown and Columbia Hospitals, he began private practice in 1910.

From 1913 to 1919, he was associated with Dr. James F. Mitchell, specializing in surgery, gynecology and obstetrics. During World War I he was a Major in the Army Medical Corps, serving with Dr. A. Y. P. Garnett, who later became Chief of the Obstetrical Service at Garfield while Dr. Neill became Chief Gynecologist. After the War the two doctors shared offices at 1824 Massachusets Avenue, N. W., until Dr. Neill's death.

In 1919 he gave up obstetrical work and confined himself to surgery and gynecology. He was consulting gynecologist at Emergency Hospital for the past eight years and senior gynecologist at Garfield from 1918 until his retirement a year ago. He was on the teaching staff of Georgetown University School of Medicine as Professor of Gynecology from 1927 to 1932.

Dr. Neill became a member of the Medical Association of the District of Columbia in 1911, and was elected President of the District Medical Society for the year 1937–38. He was also Past President of the Clinico-Pathological Society, and a Fellow of both the American College of Surgeons and the American Medical Association. He was a member of the Metropolitan and Chevy Chase Clubs.

THOMAS EDWIN NEILL, M.D., F.A.C.S.

CAT.

Dr. Neill resided at 2231 California Street, N. W., but he particularly enjoyed spending his leisure time at his farm near Middleburg, Va., where he could indulge in his favorite sports, fox hunting and bird shooting.

Surviving are his wife, Mrs. Eleanor Emerson Neill, whom he married in 1913; his daughter, Mrs. Eleanor Neill Chambers, of Scarsdale, New York; a sister, Mrs. Julia E. Morrow, of Bluemont, Va.; and two brothers, Robert E. Neill of Loudoun County, Va., and William E. Neill, of Albany, New York.

VIRGIL B. JACKSON, M.D., F.A.C.S.

(1869–1948)

A TRIBUTE TO DR. JACKSON

Dr. Virgil B. Jackson lived quietly, peacefully, unobtrusively. From the great silences he derived inspiration. His spiritual strength was like unto the strength of the hills—serene, unwasteful, mighty. It is apparent, therefore, that his days were phenomenally productive.

Early in life Dr. Jackson realized that the highest function of life is to serve, and early in life he dedicated his life to others. In that service he found joy, and because of that service life reserved for him its richest reward, the flame and the spirit and the glory of living.

The coarseness, the bluster of modern life touched him not. He was supreme in greatness of soul. Those who had the privilege of knowing the inner spring of his being had their souls washed in the purity of his life.

EDWARD Y. DAVIDSON, M.D.

Dr. Virgil B. Jackson, a Life Member of the Medical Society of the District of Columbia since 1937, died February 15, 1948, at Emergency Hospital. He had been in ill health for several years.

Dr. Jackson was born in Front Royal, Virginia, in 1869 and received his early education in the public schools of that city. He graduated from Columbian University (now George Washington University) School of Medicine in 1894. He was assistant gynecologist and resident physician at Columbian College Hospital, 1894–95, surgeon for the Metropolitan Police Department in 1897, and for many years clinical instructor in gynecology and associate surgeon at Emergency Hospital. He retired from active practice in 1941.

Dr. Jackson became a member of the Medical Association of the District of Columbia in 1896. He was a member of the committee which appeared before the 68th Congress when the present Society was chartered in 1924. He was a Fellow of the American Medical Association and the American College of Surgeons, and a member of the District Clinical Society, the George Washington University Medical Society, and the Medical Society of Northern Virginia and Maryland. During World War I he served on the Medical Advisory Board.

Survivors include his wife, Mrs. Rose R. Jackson, and a son, Daniel G. Jackson, both of whom reside at the family home on 4624 Reservoir Road, N.W.; a sister, Mrs. Marion Dorset, of Baltimore; and two brothers, the Rev. Dr. Eugene B. Jackson, Harrisonburg, Va., and E. Hilton Jackson, of Chevy Chase, Md.

FRANCIS JOSEPH READY, M.D.

(1885–1948)

Dr. Francis Joseph Ready, an Active member of the District Medical Society, died February 19, 1948, at the U. S. Naval Hospital at Bethesda, after an extended illness. Due to ill health Dr. Ready had been unable to practice since 1934. He resided at 3325 N Street, N.W.

Dr. Ready was born in the District of Columbia, August 7, 1885, and attended St. John's College. He graduated from Georgetown University School of Medicine in 1913, and began practicing in the District the same year. During World War I, he served in the U. S. Navy as a medical officer, 1918–19, following which he located in the state of Virginia, where he remained until 1923, when he returned to Washington and reëstablished his office.

While in active practice he was a member of the staff of Georgetown University Hospital and for many years was Associate Professor of Clinical Medicine at Georgetown University School of Medicine.

He was an Active member of the Medical Society from 1915 until 1918, when he enlisted for war service, and was reëlected to Active membership in 1925. He was a member of the American Medical Association, the Virginia Medical Society, and the Georgetown Clinical Society. Fraternal organizations of which he was a member included the Knights of Columbus, Elks, Modern Woodmen of America, and the American Legion.

He is survived by his father, Morris J. Ready; a daughter, Mrs. John W. McGovern, Jr.; and a brother, Earl P. Ready, all of Washington. His wife, the late Mary E. Ready, preceded him in death in 1942.

Medical Preparedness in Atomic Defense—Brown

(*Continued from page 196*)

heinous types of warfare which may be used against us.

Members of the dental profession and of the nursing profession, the X-ray and laboratory technicians, and many others engaged in scientific pursuits allied to medicine should be prepared to play a prominent role, and all should maintain an interest in the manifold problems.

Now that the travel time of propelled vehicles between the great centers of epidemic disease and the United States is less than the incubation period of these diseases, more than ever must their clinical characteristics be studied, more than ever must we perfect our methods of detection and prevention.

There is no better nor more practical way to provide this knowledge and indoctrination and to insure it for the future than to provide, as a part of the required curriculum of every medical school in the country, courses in the elementary principles of military medicine as we know them today.

This is rapidly becoming a must, and the sooner this is fully appreciated and acted upon by our medical schools, just so much sooner are they assuming their proper role in the public interest. Even medical schools must be attuned to the times and must therefore proceed with vigor and initiative to fully prepare their graduates for public service.

In an all-out war, with total manpower mobilization, all medicine, of necessity, becomes military medicine.

Only by universal indoctrination of the medical profession with the principles of military medicine will there be developed in every physician an awareness and an interest in the potentialities of all possible new types of warfare and an appreciation of his own obligation and importance in the national defense.

Gastrointestinal Endoscopy—Brick

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Carcinoma of Head of Pancreas and of Thyroid—Kiernan

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Washington Physicians of Yesterday—Barton

(*Continued from page 243*)

tion) has had since its formation in 1817 Dr. Barton was the youngest at the time of accession to the office; although in this respect he had priority of only five and a half months over Dr. Oscar B. Hunter.

Dr. Barton was a member of a number of other medical societies, a Fellow of the American College of Physicians, a prominent Mason. He was memoralized in "Who's Who in America." He married Mary A. Quinn, August 12, 1905.

Evidencing the possession of a versatile, broad, and keen mind, Dr. Barton's scientific and literary contributions and publications were important, prolific, and varied. They comprised not only works of a professional character, but also avocational and nonmedical contributions; and at his death he left some important manuscripts, including a novel, which were unpublished. In addition to many medical articles published in the current periodical literature, Dr. Barton was author of the following books:

Thesaurus of Medical Words and Phrases (co-author with Dr. Walter A. Wells), 1903
Manual of Vital Function Testing Methods, 1916; second edition, 1917
Therapeutic Index, 1917
The Road to Washington, 1919 (a study of the route followed by the British forces in their attack upon Washington in 1814)
Medicine (Volume X in Popular Science Series), 1922
Symptom Diagnosis (co-author with Dr. Wallace M. Yater), 1927; second edition, 1933.

From this catalogue of his connections and doings it is apparent that Dr. Barton was a man of exceptional activity, ability, and achievement. In addition to his recognized scientific and intellectual capabilities and professional standing, he had a sparkling and attractive personality, which made him a charming and popular associate.

Dr. Barton died April 2, 1930, at the Mayo Clinic, in Rochester, Minnesota. Fittingly his funeral services were conducted in the auditorium of the Medical Society Building, the only time when it has ever been used for such a unique purpose. An eloquent and appreciative memorial address in his honor was delivered by Dr. Edward Y. Davidson at the meeting of the Medical Society on October 15, 1930.

John B. Nichols, M.D.

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TRANSORBITAL LOBOTOMY

Preliminary Report of Ten Cases*

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SHORTLY after the original publications of Egas Moniz[1] on the subject of frontal lobotomy, a number of Italian investigators became interested in the surgical treatment of mental disorders. Fiamberti[2] first proposed the transorbital method of severing the connections in the frontal lobe. This approach to the frontal lobes had been in use for some time previously, however, both for ventriculography[3] and for malaria inoculation.[4] Fiamberti[5] thrust a trocar through the orbital plate, and then either injected a small quantity of 10 per cent formalin or inserted the Moniz leukotome and cut cores within the white matter of the frontal lobes. Detailed reports were lacking, however, and the results as originally reported were not very encouraging. It was about at this time, also, that the shock methods of treatment in psychiatry were being introduced, and little or nothing was heard of the transorbital method during the War.

Fiamberti[6] took up the study again last year but mostly for the purpose of answering criticisms rather than for justifying the procedure on the basis of results. From the beginning he emphasized the speed of the operation and the ease with which the basal portions of the frontal lobes could be attacked, as well as the prompt surgical recovery of the patients. Furthermore, in justifying this novel approach, he wrote: "In the present state of affairs, if some are critical about the lack of caution in therapy, it is on the other hand deplorable and inexcusable to remain apathetic, with folded hands, content with learned lucubrations upon symptomatologic minutiae or upon psychopathic curiosities, or, even worse, not even doing that." The best documented report of 25 operations on 21 patients is by my former young colleague, Fernández-Morán.[7]

After 10 years' experience with frontal lobotomy in association with Watts,[8] it seemed that there might be some cases in which the likelihood of recovery under conservative measures, including shock therapy, was not good, and yet in which the personality alterations induced by standard frontal lobotomy might be equally undesirable. I therefore undertook a study of the transorbital approach.

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ANATOMY

Several operations were carried out upon cadavers. Most of the surgical steel instruments were too large or too soft to penetrate the orbital plate with a sufficiently small opening. However, when satisfactory penetration was obtained, the openings in the orbital plates were usually rather small and round. Occasionally a small plate of bone was broken off, but remained attached to the dura and was not carried into the substance of the brain. The openings were found to lie in the vault or dome of the orbital plate, well back of the frontal sinuses and lateral to the ethmoids. The openings also lay anterior to the attachment of the ocular muscles. In some of these trials, methylene blue was injected to reveal the track of the instrument. The opening into the base of the frontal lobe was about 3 cm. lateral to the longitudinal fissure and 2 cm. behind the frontal pole (fig. 1). A small quantity of dye escaped into the subarachnoid space. Upon sectioning the frontal lobe along the course of the instrument a triangular zone of severed fibers was observed in the frontal pole. The instrument penetrated the cortex with very little damage, and the broader area above was due to the lateral swing of the instrument when it had penetrated to the desired depth. Closer examination of this lesion (fig. 2) indicated that it severed the fibers in the central portion of the frontal pole anterior to the rostrum of the corpus callosum and to the insula. The incision did not reach down to the lower medial portion of the white matter, a zone of considerable importance as far as researches by Freeman and Watts,[9] Reitman,[10] and Hofstatter,

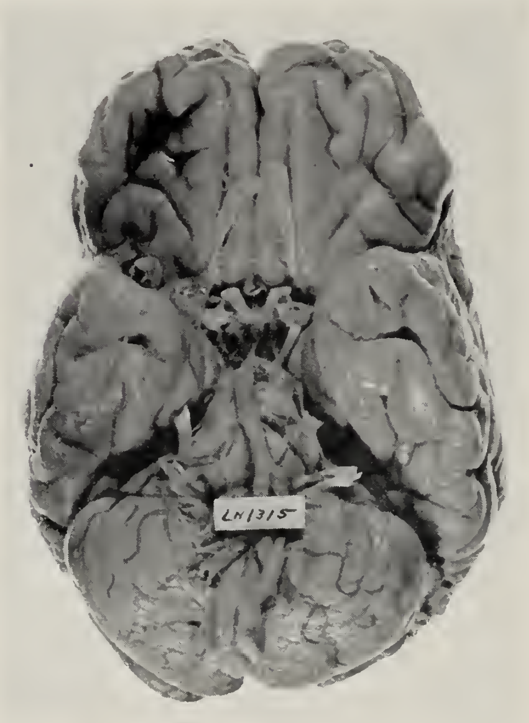

FIG. 1. Transorbital lobotomy on cadaver. The point of penetration is marked by methylene blue at the base of the right frontal lobe (left side of photograph). The opposite side was also operated upon but the point of penetration, although symmetrical, cannot be distinguished.

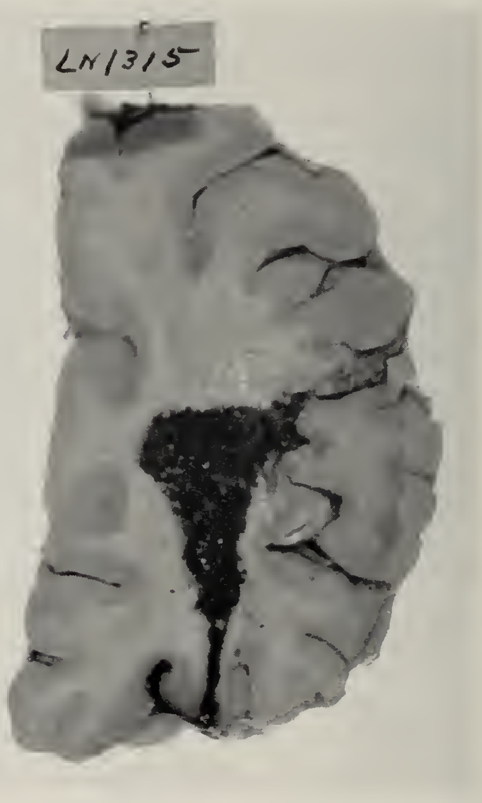

FIG. 2. Section of the frontal lobe along the path produced by the instrument shows the extent of the cut made by lateral movement. Cadaver specimen.

Smolik and Busch[11] had indicated. On the other hand, it seemed that laceration of major blood vessels would be unlikely provided the point of the instrument was not directed too far posteriorly. Some recent studies upon frontal lobe functions[12] had indicated that the fibers that were severed might be of crucial importance in the thalamofrontal connections associated with the fantasy life, and therefore that the transorbital operation might be successful provided the psychotic process had not become too stabilized.

CHOICE OF PATIENTS

The only reports available had indicated that transorbital lobotomy was carried out largely in deteriorated schizophrenics, patients that Freeman and Watts[13] had shown to be unpromising material even under the best conditions. I undertook, therefore, to determine the applicability of the method in a few selected cases in which the psychosis either was in its early stage or had not produced much personality disorganization. The patient, moreover, was considered a poor candidate for recovery under shock therapy as well as under more conservative measures.

TECHNIC

Electroconvulsive shock is the "anesthetic" of choice. The generally disrupting effect of electroshock upon cortical mechanisms underlying conditioned reflexes and psychotic behavior is well known. Such disruption could apparently lay a foundation for more flexible behavior once the driving force of the fantasy life was eliminated. Since recovery from the postconvulsive coma is sometimes rapid, the effect of the original shock is enhanced by repeating the convulsive shock dosage as soon as the patient begins to recover consciousness as shown by fluttering of the eyelids. This usually requires from 1 to 2 minutes.

Following the subsidence of the second convulsion and while the patient is inert, the upper eyelid is pinched between thumb and finger to draw it well away from the eyeball, and the point of a sharp sterile instrument (poniard, stiletto, punzón, icepick, ago-guida) is introduced into the conjunctival sac just back of the tarsal plate. By moving it around a little the instrument settles naturally into the vault of the orbit and is then struck sharply with a hammer to produce clean penetration into the cranial cavity. The instrument is held approximately parallel with the bridge of the nose and driven with successive gentler blows to a depth of 7 cm. from the margin of the upper lid. Once the instrument is in place it is desirable to take a profile photograph for the purpose of the record. Then the instrument is moved in the frontal plane, medially about 15° and laterally about 15° in order to sever the connections in the frontal lobe. Anteroposterior movement is avoided, and the instrument is withdrawn. Firm pressure is applied immediately in order to minimize the escape of blood into the orbital tissues.

By this time the patient is usually beginning to stir again. Before much activity returns the electrodes are again applied to the temples and another convulsion is excited by the electric current. When the convulsion subsides transorbital lobotomy is performed upon the opposite side in a manner similar to that described above. Experience has shown that both sides may be operated upon at the same sitting without increased danger.

POSTOPERATIVE STATE

The patient shows scarcely any more disturbance than that which could be attributed to the triple electroconvulsive shock. Within 20 minutes, usually, he has regained enough consciousness to smile and to mumble replies to questions. Within an hour he may be sitting up, and when dinner arrives he is ready for it. Occasionally some vomiting occurs in the first few hours following operation, accompanied by headache and rise in temperature to 100° F. There is usually some ecchymosis about the orbit, which subsides within a week or so. Cold compresses may be used for the first 12 hours, but there is usually so little pain that they may be omitted. Although the conjunctival sac is normally sterile and a copious flow of tears results from the electroshock, sulfadiazine, 4 grams, is given in the following 12 hours, as prophylaxis against infection.

TABLE 1

Results of Transorbital Lobotomy after Two Years

CASE NO.	SEX AND AGE	DIAGNOSIS	DURATION		PRESENT STATUS	RESULT	REMARKS
			Symptoms	Disability			
1	F 29	Schizophrenia, paranoid	13 months	No	Keeping house	Fair	Postoperative shock treatment
2	F 65	Agitated depression	22 months	3 months	Died of carcinoma 20 months after operation	Fair	
3	F 47	Agitated depression	7 years	4 months	Keeping house	Good	Postoperative shock treatment
4	M 28	Schizophrenia, paranoid	11 months	5 months	Employed	Fair	Temporary hemiparesis Convulsions
5	F 34	Schizoid	4 years	No	Keeping house	Fair	
6	F 22	Schizophrenia, hebephrenic	5 months	2 months	Keeping house	Good	Married
7	F 66	Agitated depression	4 years	4 years	Keeping house	Good	
8	M 26	Schizophrenia, paranoid	9 years	No	Employed	Good	
9	F 36	Schizophrenia, paranoid	5 months	No	Hospitalized	Poor	Relapsed 18 months after operation
10	F 35	Schizophrenia, paranoid	12 years	12 years	Home	Fair	13 months in hospital after operation

The mental condition of the patient shows little abnormality once the postshock confusion is past. There may be some prolongation of the disorientation and a moderate degree of inertia, but the fatuous euphoria, bland indifference, and purposeless activity so often seen following standard frontal lobotomy are not present. The most striking phenomenon is the subsidence of the emotional distress that had been the outstanding feature of the mental disorder. Patients can talk clearly and coherently, even rather objectively, about the ideas that had distressed them so acutely beforehand. They find it difficult to realize the nature of the change that has occurred in them and sometimes repeatedly ask what was done to them to make them feel so different. They are unembarrassed about the black eyes and take life in general much more casually than they did before operation. Often within a day or two they are recovered sufficiently to return to their homes, and a few days later their energies return, so that they are again willing or even eager to return to their former activities. Reports from members of the family indicate that patients are like their prepsychotic selves, no longer moody nor distressed, that they quiet down, sleep, and eat well, almost as if they waked up from a bad dream.

COMPLICATIONS

Of the 10 cases reported in this preliminary communication and followed for a period of 2 years, there was 1 instance of left hemiparesis of 4 days' duration with complete recovery of power on that side. Later on this patient developed epileptic seizures which were rather disturbing at first but have come under better control during the past year. The other 9 patients suffered no ill effects (table 1). One of my patients died 20 months after operation of carcinoma of the pancreas.

RESULTS

Of the 9 living patients 5 are keeping house, 2 are employed, 1 is living at home, and 1 relapsed 18 months later and at present is hospitalized. Three of the patients are making a rather precarious adjustment and may relapse, but the others are in good emotional balance and promise to remain so. One patient was recently married.

CONCLUSIONS

Transorbital lobotomy has a place in the treatment of mental disorders somewhere between shock therapy and major frontal lobotomy. It is to be considered in the case of schizophrenics who have been sick less than a year, hospitalized less than 6 months, and responding unfavorably to shock therapy.

It may be tried in cases of involutional depression with agitation when shock therapy fails; if transorbital lobotomy produces only temporary results, standard frontal lobotomy may give permanent relief.

Transorbital lobotomy does not seem to produce the undesirable effects that sometimes follow frontal lobotomy. Part of this is due to the less extensive character of the operation, since only about one third as many fibers are severed as in the standard operation. Another important part of this is due to the relatively good preservation of the personality of the patient at the time the operation is performed.

Six of the 10 patients upon whom transorbital lobotomy was performed responded favorably and are considered well 2 years following operation.

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STATISTICAL ANALYSIS OF DEATHS AMONG DIABETICS IN THE DISTRICT OF COLUMBIA FOR A PERIOD OF 42 YEARS (1903-1944 INCLUSIVE)

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Associate Clinical Professor of Medicine, George Washington University School of Medicine

THIS full study of cases in which diabetes mellitus is mentioned on the death certificate covers a period of 42 years, 1903–1944. The material for this study is taken from the death certificates as filed with the Division of Vital Statistics of the Health Department of the District of Columbia. The cases were divided into two periods for comparative purposes, 1903 to 1923 inclusive and 1924 to 1944 inclusive. The year 1924 is considered the year when insulin became available, generally understood, and used by the general practitioner.

All data which could be secured from a death certificate were considered and studied. The data recorded included: The total number of deaths for each year; the total number considered as deaths from diabetes or its complications; the total number considered as deaths from causes other than diabetes but having

TABLE 1

Deaths among Diabetics

YEAR	TOTALS FOR THE YEARS 1903 TO 1923 INCLUSIVE			POPULATION OF DISTRICT OF COLUMBIA
	Total number	Deaths due primarily to diabetes or its complications	Deaths due primarily to diseases other than diabetes	
1903	26	25	1	294,424
1904	35	30	5	299,659
1905	45	31	14	304,894
1906	28	23	5	310,129
1907	53	36	17	315,364
1908	36	26	10	320,599
1909	49	42	7	325,834
1910	55	48	7	331,069
1911	57	48	9	341,720
1912	50	35	15	352,370
1913	67	57	10	363,020
1914	70	52	18	373,670
1915	72	59	13	384,320
1916	72	57	15	394,970
1917	71	63	8	405,620
1918	69	55	14	416,270
1919	77	62	15	426,920
1920	61	48	13	437,571
1921	74	58	16	442,508
1922	80	63	17	447,637
1923	97	73	24	452,366
Totals	1,244	991	253	

TABLE 1-A

Deaths among Diabetics

YEAR	TOTALS FOR THE YEARS 1924 TO 1944 INCLUSIVE			POPULATION OF DISTRICT OF COLUMBIA
	Total number	Deaths due primarily to diabetes or its complications	Deaths due primarily to diseases other than diabetes	
1924	84	55	29	457,295
1925	96	64	32	462,224
1926	118	84	34	467,153
1927	107	75	32	472,082
1928	121	76	45	477,011
1929	126	80	46	481,940
1930	137	78	59	486,869
1931	133	58	75	504,493
1932	133	61	72	522,115
1933	141	58	83	539,737
1934	181	83	98	557,359
1935	159	73	86	574,981
1936	168	52	116	592,603
1937	182	73	109	610,225
1938	159	37	122	627,847
1939	184	52	132	649,931
1940	219	91	128	677,000
1941	179	51	128	750,000
1942	253	46	207	848,000
1943	241	64	177	900,000
1944	227	56	171	900,000
Totals	3,348	1,367	1,981	

TABLE 2

Deaths among Diabetics

YEAR	SEX, 1903–1923					
	All cases		Primary cause diabetes		Causes other than diabetes	
	M	F	M	F	M	F
1903	13	13	13	12	0	1
1904	17	18	13	17	4	1
1905	25	20	16	15	9	5
1906	14	14	12	11	3	2
1907	31	22	23	13	8	9
1908	17	19	9	17	8	2
1909	16	33	15	27	1	6
1910	34	21	30	18	4	3
1911	30	27	26	22	4	5
1912	22	28	16	19	6	9
1913	36	31	29	28	7	3
1914	28	42	20	32	8	10
1915	32	40	26	33	6	7
1916	36	36	28	29	8	7
1917	31	40	27	36	4	4
1918	29	40	25	30	4	10
1919	38	39	29	33	9	6
1920	24	37	20	28	4	9
1921	34	40	27	32	7	8
1922	32	48	23	40	9	8
1923	40	57	29	44	11	13
Totals..	579	665	456	536	124	128

TABLE 2-A

Deaths among Diabetics

YEAR	SEX, 1924–1944					
	All cases		Primary cause diabetes		Causes other than diabetes	
	M	F	M	F	M	F
1924	39	45	21	34	18	11
1925	31	65	19	45	12	20
1926	54	64	38	46	16	18
1927	41	66	28	47	13	19
1928	50	71	30	46	20	25
1929	50	76	33	47	17	29
1930	58	79	29	49	29	30
1931	53	80	15	43	38	37
1932	45	88	20	41	25	47
1933	56	85	22	36	34	49
1934	66	115	26	57	40	58
1935	62	97	27	46	35	51
1936	53	115	12	40	41	75
1937	79	103	32	41	47	62
1938	65	94	17	20	48	74
1939	65	119	17	35	48	84
1940	83	136	29	62	54	74
1941	64	115	15	36	49	79
1942	92	161	13	33	79	128
1943	96	145	29	35	67	110
1944	80	147	15	41	65	106
Totals....	1282	2066	487	880	795	1186

diabetes mentioned on the death certificate; sex; race; occurrence of gangrene, acidosis and/or coma, pneumonia, general infection and exhaustion in deaths due to diabetes; the occurrence of gangrene, tuberculosis and acidosis and/or coma in the group in which death was attributed to causes other than diabetes; age; home and hospital care; and finally an analysis of the causes of deaths in the group in which diabetes was considered a secondary or contributory cause.

To complete this study, it would have been ideal to have had questionnaires distributed to the various attending physicians as to symptoms, duration of disease, and character of treatment, but this was impractical.

Totals of the Two Groups

The total number of deaths in the period 1903–1923 in which diabetes is cited is 1,244. The total number for the 1924–1944 period in which diabetes is mentioned is 3,348, which is nearly 3 times greater than those recorded in the first period.

The population increase year by year has some rhythm. From 1905 to 1910 the average yearly increase was 5,200 or 1.6 per cent; from 1911 to 1920, 10,650 or 2.7 per cent; from 1921 to 1929, 4,900 or 1 per cent; from 1930 to 1937, 17,600 or 3.3 per cent; and from 1937 the increase was irregularly up, mushrooming with the War and averaging from 3.4 to 11 per cent.

The average increase in the number of diabetics recorded for each period was 300 per cent.

General Division of Studies

All cases in the two periods are divided into those in which death was recorded as primarily due to diabetes or its complications and those in which death was recorded as due primarily

TABLE 3

Deaths among Diabetics

YEAR	RACE, 1903–1923							
	Primary cause diabetes				Causes other than diabetes			
	M W	M C	F W	F C	M W	M C	F W	F C
1903	13	0	10	2	0	0	1	0
1904	11	2	14	3	4	0	1	0
1905	13	3	13	2	9	0	5	0
1906	12	0	11	0	1	1	2	1
1907	22	1	13	0	8	0	9	0
1908	9	0	13	4	8	0	2	0
1909	13	2	23	4	1	0	6	0
1910	26	4	17	1	4	0	3	0
1911	26	0	18	4	4	0	4	1
1912	14	2	17	2	5	1	9	0
1913	23	6	21	7	7	0	2	1
1914	18	2	28	4	8	0	9	1
1915	22	4	27	6	6	0	6	1
1916	24	4	23	6	7	1	6	1
1917	23	4	25	11	3	1	4	0
1918	19	6	24	6	4	0	9	1
1919	26	3	20	13	6	3	5	1
1920	15	5	17	11	3	1	9	0
1921	23	4	19	13	6	1	7	1
1922	17	6	26	14	8	1	8	0
1923	21	8	28	16	10	1	13	0
Totals	390	66	407	129	112	11	120	9

TABLE 3-A

Deaths among Diabetics

YEAR	RACE, 1924–1944							
	Primary cause diabetes				Causes other than diabetes			
	M W	M C	F W	F C	M W	M C	F W	F C
1924	13	8	16	18	14	4	8	3
1925	16	3	27	18	12	0	17	3
1926	27	11	24	22	12	4	17	1
1927	21	7	31	16	9	4	16	3
1928	19	11	20	26	17	3	25	0
1929	21	12	22	25	16	1	24	5
1930	24	5	25	24	26	3	25	5
1931	9	6	17	26	34	4	29	8
1932	15	5	19	22	21	4	40	7
1933	14	8	17	19	28	6	38	11
1934	18	8	25	32	36	4	49	9
1935	15	12	25	21	31	4	47	4
1936	10	2	17	23	37	4	60	15
1937	21	11	18	23	42	5	47	15
1938	14	3	13	7	42	6	57	17
1939	11	6	17	18	39	9	63	21
1940	17	12	34	28	44	10	65	9
1941	10	5	19	17	38	11	62	17
1942	4	9	15	18	69	10	92	36
1943	20	9	18	17	59	8	75	35
1944	9	6	17	24	55	10	77	29
Totals	328	159	436	444	681	114	933	253

to disease other than diabetes, with diabetes considered only a secondary or contributory cause of death.

It is to be noted that 991 or 79 per cent of the 1,244 patients in the first period, 1903–1923, died primarily of diabetes or its complications, whereas 253 or 21 per cent died of causes other than diabetes (table 1).

In the second or post-insulin period, 1924–1944, 1,367 or 40.8 per cent of the 3,348 patients died primarily of diabetes or its complications, whereas 1,981 or 60 per cent died of causes other than diabetes (table 1-A).

SEX

In the first 21-year period, 1903–1923 inclusive, 579 or 46.5 per cent were males and 665 or 53.4 plus per cent were females (table 2).

In the second 21-year period, 1924–1944 inclusive, 1,282 or 38.2 per cent were males and 2,066 or 61.7 plus per cent were females (table 2-A).

The same percentage nearly obtained in a breakdown into the two subdivisions. For the years 1903–1923, of those who died of diabetes or its complications, 46 per cent were males and 54 per cent were females; and of those who died of causes other than diabetes, 49 per cent were males and 51 per cent were females. For the years 1924–1944, of those who died of diabetes or its complications, 35 per cent were males and 65 per cent were females; and of those who died of causes other than diabetes in this period, 40 per cent were males and 60 per cent were females.

RACE

Of the total 1,244 cases recorded on death certificates as having diabetes in the years 1903–1923, 1,029 or 82.7 per cent were white and 215 or 17.3 per cent were colored. Broken down further, 40.6 per cent were male white, 42.3 per cent were female white, 6.1 per cent were male colored, and 11 per cent were female colored (table 3).

Of the total 3,348 cases recorded on death certificates as having diabetes in the years 1924–1944, 2,378 or 71 per cent were white and 28.9 per cent were colored. Broken down further, 30.1 per cent were male white, 40.8 per cent were female white, 8.1 per cent were male colored, and 20 per cent were female colored (table 3-A).

From tables 3 and 3-A race studies were broken down further and divided into those patients who died of diabetes as a direct cause and those who had diabetes as a secondary or contributory cause.

In the period 1903–1923, 39 per cent of the total number of cases in which the primary cause of death was diabetes were in white males, 6.6 per cent were in colored males, 41 per cent were in white females, and 13 per cent were in colored females. In the same period, of the total number of the cases in which death was due to causes other than diabetes but diabetes was mentioned as a secondary or contributory cause, 44 per cent were in white males, 4.3 per cent were in colored males, 49 per cent were in white females, and 3.5 per cent were in colored females.

In the period 1924–1944, 24 per cent of the total number of cases in which the primary cause of death was diabetes were in white males, 11.6 per cent were in colored males, 31.8 per cent were in white females, and 32.4 per cent were in colored females. In the same period, of the total number of cases in which death was due

TABLE 4

Deaths among Diabetics

YEAR	COMPLICATIONS, 1903–1923									
	All Cases				Diabetes considered as primary cause of death					
	Gangrene	Tbc	Acidosis and/or coma	Cancer	Gangrene	Pneumonia	General infection	Acidosis and/or coma	No specific cause given	Exhaustion
1903	1	0	11	0	1	0	1	11	3	6
1904	5	0	15	0	5	0	2	15	2	5
1905	5	1	20	0	1	0	0	20	5	5
1906	3	0	12	0	3	1	1	10	4	4
1907	3	0	17	0	2	0	2	15	6	11
1908	2	1	12	0	2	2	1	11	5	10
1909	5	0	16	0	5	0	0	15	12	10
1910	3	2	27	1	2	2	3	26	8	10
1911	4	3	25	1	4	1	2	24	9	8
1912	6	0	17	0	5	1	0	17	7	11
1913	12	3	28	0	7	0	6	27	8	13
1914	8	1	33	2	6	0	4	31	8	8
1915	6	0	35	1	6	0	3	34	9	16
1916	12	2	37	0	12	1	2	24	9	11
1917	13	1	31	0	15	1	2	28	13	11
1918	5	0	34	1	4	1	4	31	13	7
1919	9	3	33	1	9	0	4	30	18	11
1920	9	1	25	1	9	0	2	23	11	7
1921	10	2	30	1	10	0	3	30	21	5
1922	11	0	31	2	10	1	2	29	16	10
1923	9	1	30	0	9	4	8	29	20	13
Totals...........	141	21	519	11	127	15	52	480	207	192

to a cause other than diabetes but diabetes was mentioned as a secondary or contributory cause, 34.5 per cent were in white males, 5.7 per cent were in colored males, 47 per cent were in white females, and 12.7 per cent were in colored females.

Occurrence of Coma, Gangrene, Etc. in Primary Diabetic Deaths

With the institution of insulin and probably a better dietetic management of the diabetic in 1922, improvement in the care of the diabetic was supposedly advanced. Have we prevented the occurrence of some of the severe complications of the diabetic by this improved management?

In the period 1903–1923, of those having diabetes as a primary cause of death, 12.8 per cent had gangrene recorded on the death certificate, whereas in the period 1924–1944 17.7 per cent had gangrene recorded on the death certificate. In the period 1903–1923, coma and/or acidosis occurred in 48.4 per cent of the cases having diabetes as a primary cause of death, whereas in the period 1924–1944 46.7 per cent had acidosis and/or coma recorded on the death certificate. There does not seem to be any lessened number of the two outstanding complications of diabetes (tables 4 and 4-A).

In the period 1903–1923 11.3 per cent of all cases with diabetes recorded on the death certificate had gangrene recorded also, and in the period 1924–1944 11.1 per cent had gangrene recorded also.

In the period 1903–1923 41.7 per cent of all cases with diabetes recorded on the death certificate had acidosis and/or coma recorded also, and in the period 1924–1944 21 per cent had acidosis and/or coma recorded also.

TABLE 4-A

Deaths among Diabetics

YEAR	COMPLICATIONS, 1924–1944									
	All cases				Diabetes considered as primary cause of death					
	Gangrene	Tbc	Acidosis and/or coma	Cancer	Gangrene	Pneumonia	General infection	Acidosis and/or coma	No specific cause given	Exhaustion
1924	9	1	38	1	8	0	8	25	11	4
1925	9	5	25	1	8	1	4	21	9	13
1926	21	5	38	1	14	0	7	34	17	20
1927	13	1	34	2	13	0	6	31	23	13
1928	13	3	39	2	9	2	6	35	15	12
1929	24	1	38	1	18	6	5	37	4	5
1930	16	4	25	1	15	2	3	24	25	4
1931	20	7	24	3	15	3	3	22	11	1
1932	12	5	28	6	7	3	9	27	9	3
1933	18	3	39	2	17	1	6	39	4	4
1934	22	6	40	6	17	3	2	40	8	1
1935	15	7	35	11	8	1	15	33	4	1
1936	20	3	29	2	11	1	7	27	9	1
1937	23	4	31	5	18	11	14	30	4	1
1938	12	5	24	6	7	1	7	21	5	0
1939	17	4	32	6	8	2	10	24	0	0
1940	26	4	42	1	23	5	11	38	14	0
1941	19	0	34	0	9	1	3	32	8	0
1942	23	6	30	7	9	1	1	27	7	0
1943	28	0	38	0	12	0	11	35	6	0
1944	14	2	43	1	6	1	2	37	10	0
Totals	374	76	706	65	252	45	140	639	203	83

TABLE 5

Deaths among Diabetics

YEAR	AGE, 1903–1923				
	Average age at death primary cause diabetes	Average age at death causes other than diabetes	Further age studies in deaths due primarily to diabetes and its complications		
			Coma	Gangrene	Infections excluding pneumonia
1903	55.0	81.0	48.2	75.0	56.0
1904	49.5	65.6	43.2	61.0	24.0
1905	46.8	69.6	42.4	66.0	48.0
1906	49.5	64.5	47.4	65.3	52.0
1907	49.5	66.5	46.4	56.5	66.0
1908	43.15	70.4	48.09	54.0	46.0
1909	51.4	69.7	51.26	55.0	00.0
1910	52.4	67.2	53.52	63.0	43.3
1911	55.4	65.88	54.2	70.1	48.0
1912	47.6	63.46	45.52	59.8	00.0
1913	53.48	64.8	46.61	61.0	53.37
1914	50.67	72.3	47.4	61.0	50.6
1915	51.26	65.8	44.16	64.1	39.2
1916	57.1	59.2	50.0	58.6	54.4
1917	53.1	66.2	46.3	62.3	55.2
1918	45.6	60.4	45.7	67.0	44.0
1919	50.0	62.0	50.1	70.0	49.8
1920	55.2	62.0	54.8	58.4	53.3
1921	50.6	63.93	49.66	59.0	56.0
1922	54.6	58.58	46.01	64.8	44.7
1923	51.8	64.1	48.7	62.4	54.9
Avg. age....	51.1	65.8	48.0	62.5	49.4

TABLE 5-A

Deaths among Diabetics

YEAR	AGE, 1924–1944				
	Average age at death primary cause diabetes	Average age at death causes other than diabetes	Further age studies in deaths due primarily to diabetes and its complications		
			Coma	Gangrene	Infections excluding pneumonia
1924	51.66	62.4	48.6	65.6	54.7
1925	52.71	60.1	50.9	59.2	53.0
1926	49.2	69.5	49.4	60.5	46.8
1927	56.8	66.9	49.6	64.8	57.8
1928	53.3	68.1	52.2	59.0	53.2
1929	56.0	64.6	52.9	60.9	38.1
1930	53.5	64.7	47.8	61.2	56.8
1931	50.2	62.1	49.9	56.0	50.0
1932	47.2	63.9	45.2	60.1	40.0
1933	60.7	62.0	63.7	63.3	56.7
1934	51.3	62.5	48.9	60.2	45.9
1935	50.2	65.6	55.2	58.2	41.4
1936	53.5	65.5	49.7	62.1	45.1
1937	50.9	63.9	44.1	67.89	48.1
1938	51.8	63.0	48.9	67.4	48.1
1939	52.8	64.0	53.4	60.5	45.8
1940	55.5	65.5	49.0	66.4	50.6
1941	56.5	65.0	53.7	67.0	35.6
1942	55.9	63.9	54.9	59.2	51.8
1943	54.5	64.9	50.8	62.2	46.7
1944	50.9	64.0	48.4	63.4	53.3
Avg. age....	53.5	64.4	51.7	64.0	48.5

It appears, therefore, that acidosis and/or coma, one of the outstanding complications of diabetes, has been reduced when we take all cases into consideration, whereas gangrene, another frequent complication, occurs in about the same percentage in the two periods.

AGE

The average age at death for all cases in the first period studied, 1903–1923, is 58.4 years, whereas the average age at death for all cases in the second period, 1924–1944, is 58.9 years, the same for the two periods approximately (tables 5 and 5-A).

The average age at death of cases in which diabetes was considered the primary cause of death in the first period, 1903–1923, is 51.1, and the average age for the same group in the second period, 1924–1944, is 53.5.

The average age of cases in which the primary cause of death is other than diabetes for the first period, 1903–1923, is 65.8, and the average age for the same group for the second period, 1924–1944, is 64.4.

Of these two groups, it seems that longevity is increased in those cases in which death is primarily due to diabetes and decreased in those cases in which death is due to causes other than diabetes.

Further age studies were made of the deaths due primarily to diabetes in which coma, gangrene, and infections other than pneumonia were complications. In the first period, 1903–1923, among those who died primarily of diabetes complicated by coma the average age was 48.0; complicated by gangrene, the average age was 62.5; and complicated by infection other than pneumonia, the average age was 49.4.

Similar age studies were made for the second period, 1924–1944; complicated by coma, the average age was 51.7; complicated by gangrene, the average age was 64; and complicated by infection other than pneumonia, the average age was 48.5.

Home and Hospital Care

As a matter of possible interest and record, a study was made as to the percentage of cases cared for in final illness at home and in the hospital in the two periods studied (tables 6 and 6-A). In the first period, 1903–1923, 69.7 per cent of the total were treated at home, and 30.3 per cent were treated in the hospital. In the second period, 1924–1944, 39.1 per cent of the total were treated at home, and 60.8 per cent were treated in the hospital.

Primary Causes of Death in Individuals Who Had Diabetes Recorded as a Contributory or Secondary Cause of Death

As indicated, 253 cases or 20.3 per cent of the total 1,244 deaths during the period 1903–1923 died of primary causes other than diabetes but diabetes was recorded as a secondary or contributory factor. Of these 253 cases, 202 or 80.1 per cent of the patients died of a cardiovascular renal disease, 20 patients or 7.8 per cent died of pneumonia, 3.1 per cent died of tuberculosis, and the remainder died of the other causes recorded in table 7.

Under the term cardiovascular renal deaths are included such diagnoses as chronic nephritis, cerebral apoplexy, cerebral thrombosis, malignant hypertension, uremia, coronary artery disease (thrombosis, occlusion), cardiac failure, cardiac decompensation, arteriosclerosis (generalized or cerebral), acute congestive heart failure,

(*Continued on page 309*)

TABLE 6

Deaths among Diabetics

YEAR	HOME AND HOSPITAL CARE, 1903–1923			
	Deaths due primarily to diabetes		Deaths due to causes other than diabetes	
	Home	Hospital	Home	Hospital
1903	21	4	1	0
1904	24	6	3	2
1905	28	3	10	4
1906	18	5	5	0
1907	26	10	15	2
1908	21	5	9	1
1909	32	10	5	2
1910	37	11	6	1
1911	34	14	9	0
1912	28	7	12	3
1913	43	14	8	2
1914	36	16	14	4
1915	37	22	8	5
1916	38	19	11	4
1917	43	20	7	1
1918	30	25	9	5
1919	39	23	10	5
1920	29	19	11	2
1921	32	26	11	5
1922	42	21	11	6
1923	40	33	14	10
Totals.......	678	313	189	64

TABLE 6-A

Deaths among Diabetics

YEAR	HOME AND HOSPITAL CARE, 1924–1941			
	Deaths due primarily to diabetes		Deaths due to causes other than diabetes	
	Home	Hospital	Home	Hospital
1924	27	28	16	13
1925	36	28	18	14
1926	37	47	18	16
1927	35	40	17	15
1928	34	42	16	29
1929	26	54	23	23
1930	24	54	30	29
1931	19	39	34	41
1932	14	47	36	36
1933	20	34	40	43
1934	27	56	46	52
1935	21	52	42	44
1936	13	39	46	70
1937	14	59	52	57
1938	6	31	42	80
1939	13	39	56	76
1940	24	67	61	67
1941	14	37	55	73
1942	9	37	89	118
1943	10	54	70	107
1944	14	42	66	105
Totals.......	437	926	873	1108

TABLE 7

Deaths among Diabetics

PRIMARY CAUSE	PRIMARY CAUSES OF DEATH—DIABETES RECORDED AS CONTRIBUTORY OR SECONDARY CAUSE OF DEATH, 1903–1923																				
	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	Totals
Cardiovascular-renal	1	5	10	5	12	10	7	6	5	13	6	15	9	13	6	12	13	11	12	14	17	202
Pulmonary																						
Abscess									1													1
Bronchial asthma																						
Bronchitis			1																			1
Edema																						
Embolism																						
Empyema																						
Hemorrhage																						
Pneumonia			2		2			1		2	2	1	2	1	1	1		1		2	2	20
Tuberculosis			1						2		1			1					2		1	8
Abdominal diseases																						
Appendicitis, ruptured																					1	1
Acute cholecystitis																						
Acute pancreatitis																						
Cirrhosis of liver																						
Diverticulitis																						
Empyema gall bladder																						
Hemorrhagic pancreatitis																						
Hernia					1																	1
Intestinal obstruction																					1	1
Mesenteric thrombosis																						
Peptic ulcer—hemorrhage																						
Perforated gastric ulcer											1											1
Perforated bowel					1																	1
Peritonitis																	1				1	2
Blood dyscrasia																						
Acute myeloid leukemia																						
Carcinoma																						
Carcinoma—unspecified									1			1				1		1	1	1		6
Cerebral diseases																						
Brain tumor																						
Cavernous sinus thrombosis																						
Meningitis—unspecified																						
Psychosis												1	1									2
Subarachnoid hemorrhage																						
Tbc meningitis																						
General																						
Alocholism																						
Cachexia																						
Exhaustion																						
Femoral thrombosis																						
Graves' disease																						
Hemorrhage—unspecified																						
Shock—postoperative																						
Shock—unspecified																						
Toxemia—unspecified																						
Venous thrombosis—unspecified																						

TABLE 7—*Continued*

PRIMARY CAUSE	PRIMARY CAUSES OF DEATH—DIABETES RECORDED AS CONTRIBUTORY OR SECONDARY CAUSE OF DEATH, 1903–1923																					
	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	Totals
General infection																						
Arthritis																						
Carbuncle																			1			1
Grippe					1																	1
Sepsis—unspecified																	1					1
Septicemia												1									1	2
Genitourinary diseases																						
Abscess scrotum															1							1
Perinephritic abscess																						
Total deaths by years	1	5	14	5	17	10	7	7	9	15	10	19	12	15	8	14	15	13	16	17	24	253

TABLE 7-A

Deaths among Diabetics

PRIMARY CAUSE	PRIMARY CAUSES OF DEATH—DIABETES RECORDED AS CONTRIBUTORY OR SECONDARY CAUSE OF DEATH, 1924–194																					
	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	Totals
Cardiovascular-renal	18	21	25	26	35	35	36	48	56	55	70	54	80	85	77	106	117	96	157	139	135	1471
Pulmonary																						
Abscess							1		1		2						1			1	1	7
Bronchial asthma																			1			1
Bronchitis																						
Edema													1		1			1	3	3	7	16
Embolism							1	1		1	1	1			1			1	4	5	4	20
Empyema																		1		1		2
Hemorrhage																		1			1	2
Pneumonia	6	1	3	1	2	1	6	7	1	10	6	10	16	4	13	8	5	12	12	14	9	147
Tuberculosis		4	5	1	3	1	4	7	5	2	1	3	3	3	5	4	3		4			58
Abdominal diseases																						
Acute cholecystitis											1									1		2
Acute pancreatitis															3			1			1	5
Appendicitis							1	2	1	2			1			1						8
Cirrhosis of liver					1			2		1				2		2		1	1	1	4	15
Diverticulitis																	1					1
Empyema gall bladder																						
Hemorrhagic pancreatitis										1									1			2
Hernia							1															1
Intestinal obstruction					1	1		1	1	1						2				1		8
Mesenteric thrombosis											1					1		1				3
Peptic ulcer—hemorrhage																				1		1
Peritonitis	1					2			1	1					1				1	1	1	9
Pancreatitis, chronic		1																				1
Hemorrhage—gastric								1						1		1						3
Yellow atrophy liver, acute							1															1

TABLE 7-A—*Continued*

PRIMARY CAUSE	PRIMARY CAUSES OF DEATH—DIABETES RECORDED AS CONTRIBUTORY OR SECONDARY CAUSES OF DEATH, 1924–1944																					
	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	Totals
Blood dyscrasia																						
Acute myeloid leukemia																			1			1
Lymphatic leukemia											1											1
Carcinoma																						
Carcinoma, unspecified	1	1	1	1	2	1	1	3	5	2	6	12	1	6	6	4	1		7		1	62
Cerebral diseases																						
Brain tumor											2		1								1	4
Cavernous sinus thrombosis											1							1				2
Encephalitis				1																		1
Meningitis—unspecified								2						1	2				1	1		7
Multiple sclerosis														1								1
Psychosis																						
Subarachnoid hemorrhage															1						1	2
Tbc meningitis																			1			1
General																						
Alcoholism																		1				1
Cachexia																				1		1
Ectopic pregnancy—ruptured		1																				1
Exhaustion																			2			2
Femoral thrombosis																		1				1
Heat exhaustion							1															1
Hemorrhage—unspecified																			1			1
Hodgkin's disease						1																1
Hyperinsulin													1									1
Shock—postoperative	1																			2	1	4
Shock—unspecified																			2			2
Suicide										2			1									3
Toxemia—unspecified																		8	4	2	1	15
Thyrotoxicosis										1											1	2
Venous thrombosis—unspecified																					1	1
General infection																						
Abscess—pharyngeal								1														1
Arthritis																					2	2
Carbuncle	2						2						1									5
Erysipelas													2		1							3
Liver abscess				1									2	2								5
Mastoiditis							1															1
Osteomyelitis																		1				1
Sepsis—unspecified										3	1	5	3	3	6	2		2				25
Septicemia		3			1	2	3		1	4	2	1	2	1	5			1	5	2	1	34
G. U. diseases																						
Kidney infection														2								2
Perinephritic abscess						1														1		2
Prostatic hypertrophy										1												1
Total deaths by years	29	32	34	31	45	45	59	75	72	87	95	86	115	111	122	131	128	130	208	177	173	1985

THE COLPOCYTOLOGICAL (PAPANICOLAOU) METHOD OF DIAGNOSIS OF UTERINE CANCER*

A Preliminary Report

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IN 1928 Papanicolaou[1] reported a new method for the diagnosis of uterine cancer by the vaginal smear. Later, in 1943 Papanicoloau and Traut[2] published a textbook on their method of making, staining, and "reading" slides of vaginal smears. The method was based on the knowledge that tumors growing in the tubular female generative tract desquamate abnormal cells which appear in the vaginal secretion and, with proper preparation and staining, can be recognized by one skilled in the field. Like all new procedures, the method was at first received with considerable skepticism. The adverse criticism was chiefly that it was too highly technical and required too much individual training and experience in "reading" the smear to be of general value as other than a research tool.

For the most part, this reasoning is valid. The method is limited in its application, because very accurate interpretation of the smears can be made only by a pathologist who has had considerable experience with the method. However, in spite of this limitation, vaginal smears have weathered the test of time and have found a place for themselves in cancer detection work. In addition, in the field of cancer therapy, Graham and Meigs[3] have shown that, correctly interpreted, serial smears can be used in the evaluation of the effectiveness of radiation therapy and in the prognosis of the curability of cervical cancer.

The method has never been offered as one of perfection and must be accepted in its true light with a fair appreciation of its limitations. Any evaluation of the method for the diagnosis of genital cancer must be based on the understanding that it is not a substitute for dilatation and curettage or surgical biopsy but merely furnishes additional information about the patient. Smears may be negative when the patient has genital cancer, but when cancer cells are present on the smear, cancer must be searched for in tissue sections from uterine scrapings or cervical biopsy. A positive smear, even on a patient free of signs or symptoms of genital cancer, is taken as adequate indication for uterine curettage and biopsy but not as an indication for any more radical procedure prior to confirmation of the diagnosis by standard tissue sections.

The purpose of this paper is to present the results on the use of the vaginal smear method in the Warwick Memorial Clinic for Cancer and Allied Diseases and the Garfield Ladies' Aid Cancer Prevention Clinic and to show its application by illustrative case reports. The patients included in the report were from two sources. Those reported in table 1 were well patients examined in the Garfield Ladies' Aid Cancer Prevention Clinic. Each received a thorough physical examination including indirect laryngoscopy, proctoscopy, and a complete pelvic examination. The patients reported from Warwick Memorial Clinic in table 2 were patients later known to have cancer of the cervix. Each received an initial physical examination similar to that done on the well patients in the Cancer Prevention Clinic. In addition, each patient with cancer of the cervix was followed during radiation therapy with weekly pelvic examinations and vaginal smears. Only the smears made before treatment on these patients are reported here.

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* From the Warwick Memorial Clinic for Cancer and Allied Diseases and the Garfield Ladies' Aid Cancer Prevention Clinic.

TABLE 1

Results—Cancer Prevention Clinic

Total number of cases investigated	290
Total number of smears made	295
Total number of negative smears	287
Total number of smears positive	8
Number of positive smears having positive biopsy	1
Number with positive smears having negative biopsy	2
Number with positive smears without follow-up studies	2
Number with positive smears in whom biopsy was considered unnecessary by their own physicians	2
Percentage of positive smears in the series	2.7%
Percentage of proven cancer	0.34%

TABLE 2

Results in Cases of Carcinoma of the Cervix

Total number of cases studied and later proven to have carcinoma of the cervix	30
Total number of pretreatment smears	38
Total number of pretreatment positive smears	27
Total number of pretreatment negative smears	11
Percentage of positive smears	71.05%
Percentage of negative smears	28.95%

TECHNIC

The technic for making the smear is not difficult. Without previous lubrication, fluid is obtained from the unwashed vaginal fornices by means of an aspiration pipette and spread evenly on clean glass slides by blowing the aspirated material on a slide and then pressing 2 slides together. Or the Ayre spatula[4] is used to scrape the exposed and cleaned cervix and cervical os. The scraping is smeared on 2 slides and spread evenly by pressing these slides together. At least 2 slides are thus made at a time. They are reported as 1 smear. The smear is then fixed immediately by placing the slides in a solution of equal parts of 95 per cent ethyl alcohol and ether, where it may remain until stained. The smear can be stained by any one of a number of methods. The simplest stain, and the one in use in the Pathology Department at Garfield Memorial Hospital, is the standard hematoxylin and eosin stain. After staining, the smear is ready for interpretation. This is the difficult part of the procedure and requires the trained and experienced eye of a patient, painstaking cytologist. It is not within the scope of this paper to discuss the characteristics by which the cancer cells are recognized. Suffice it to say that cancer cells can be recognized.

RESULTS

From January, 1947 to October, 1947, 295 smears were prepared from 290 patients who presented themselves for examination at the Cancer Prevention Clinic. Of this number, 287 smears, or 97.3 per cent, were reported negative for cancer, and 8 smears, or 2.7 per cent, were reported positive for cancer. The 8 positive smears were recorded on 7 patients. Of these 7 patients, 1 was proven to have adenocarcinoma of the fundus by diagnostic curettage. Two were not found to have cancer by subsequent surgical biopsy. In 2 of the remaining 4, who were returned to their own physicians, biopsy was not considered necessary by those physicians. There are no follow-up reports as yet on the other 2. It should be noted here that patients are not treated at the Garfield Ladies' Aid Cancer Prevention Clinic. Reports of the findings of the cancer prevention examination, together with recommendations, are sent to the physician whose name the patient lists at the time of examination. All follow-up reports on that patient come to the Cancer Prevention Clinic through the patient's physician.

In the 290 patients studied in this series, 34 either reported abnormal pelvic symptoms or were found to have pelvic lesions at the time of examination. All smears in this group were reported negative. Of this group, 21 were returned to their own physicians, who subsequently failed to send in follow-up reports; 8 were treated by private physicians without biopsies although biopsy was suggested; and 5 were proven noncancerous by biopsy.

These results from the Cancer Prevention Clinic are tabulated in table 1.

A second series of smears was made in the Warwick Memorial Clinic for Cancer and Allied Diseases, from November, 1946 to August, 1947. The patients in this series had clinical carcinoma of the cervix and concurrently or subsequently were proven by biopsy to have cancer. In this group 38 pretreatment smears were made on 30 patients. Of the 38 smears, 27, or 71.05 per cent were reported positive for cancer, and 11, or 28.95 per cent were negative for cancer. Results of this brief series of frank cancer patients from the Warwick Memorial Clinic are outlined in table 2.

Considering the results from the Cancer Prevention Clinic, the over-all percentage of 2.7 for positive smears with only 0.34 with proven cancer in this series is not particularly significant. Certain inherent difficulties in the method contributed to the discrepancies in the results presented. It must be remembered that the results came from a new clinic, working with new personnel and using an entirely new method. The "growing pains" in the development of this work were particularly severe. Also, there was a lack of complete coöperation on the part of referring physicians in regard to follow-up reports. This played an important part in the poor statistical picture. Yet we feel that the discovery of the 1 patient with an unsuspected cancer justifies the method and more than compensates for the effort involved.

As for the results outlined in table 2, it is quite true that the percentage of 28.95 for all the negative smears on patients with positive findings in this small series of cases is entirely too large and not in keeping with recent reports. Ayre[5] reported an average error of 6 per cent for a series of 100 cases of known genital malignancy studied by a similar method. Meigs[6] reported an error of only 3.2 per cent in 2,749 cases studied. Brown, Kraushaar and Bradbury,[7] who include in their series the results on the study of 65 women who had symptoms compatible with cancer, reported the vaginal smears, 16 positive, 9 suspicious, and 40 negative for cancer. Biopsy confirmed the diagnosis in the entire positive group and established the presence of cancer in 1 patient in the suspicious group. All other patients were negative. This is a record well worth striving for.

In the light of our present knowledge, it can be stated that since the adoption of the method in these clinics, there has been a definite improvement in the interpretation of the material examined. This is in keeping with the experience of other workers in the field. A reduction in percentage of error when slides are restudied at a later date is not an uncommon finding. A combination of time, experience and effort will bring more accurate results.

REPORT OF CASES

Case 1.—Report of an asymptomatic and totally unsuspected case of cancer of the uterus.

C. T., a 34-year-old, nulliparous, married, white woman, came to the Cancer Prevention Clinic for a routine check-up. A pelvic examination was entirely negative. A routine vaginal smear was reported as possible carcinoma. Endometrium obtained by a diagnostic curettage was reported as early carcinoma. A radical hysterectomy was performed. The final pathologic report was carcinoma.

This case illustrates the value of the smear in the early diagnosis of cancer. Since the patient was asymptomatic and pelvic examination was negative, the case would have been missed except for the routine vaginal smear.

Case 2.—Report of a case showing the practical use of the smear in selecting radio-resistant cancer in the cervical stump.

E. B., a 40-year-old colored woman, came to the Clinic with the complaint of postcoital bleeding of 3 months' duration. She had had a subtotal hysterectomy performed in 1919 for abnormal bleeding. Fifteen months prior to her admission to the Clinic, she had had a "D and C" performed at another hospital for slight vaginal spotting. The pathologic report at this time was chronic cervicitis. Examination gave a clinical impression of stage I carcinoma of the cervical stump. The first vaginal smear was diagnosed as squamous carcinoma. A subsequent surgical biopsy showed squamous carcinoma. She was treated by radiation therapy with complete healing of the lesion. Three months later, when the vaginal smears were still positive, a modified Wertheim operation was performed for removal of the stump. The surgical specimen showed residual intra-epithelial carcinoma.

This case illustrates the practical application of the smear in assessing radiation therapy. At the present time it is the best known method of determining radioresistant cases. With the healing of the lesion following therapy the patient was considered clinically cured. Residual cancer was indicated by the positive smears and confirmed by the finding of cancer in the removed cervical stump.

The practical value of the vaginal smear method for the diagnosis of carcinoma has perhaps been overemphasized in recent medical and lay literature. In the past, the diagnosis of carcinoma of the uterus was made by physical examination and confirmed by biopsy. This method will continue to prevail in the future, since the large majority of women harboring a carcinoma will not be examined until they develop symptoms and when examined will show clinical evidence of carcinoma.

The clinically negative group, then, remains as the only field in which vaginal smears are of actual diagnostic value. Statistics indicate that in this large group, approximately 1 woman in 1,000 will have carcinoma of the uterus. A number of cases of early carcinoma would be found in screening large groups of women as well as a few cases of intra-epithelial (in situ) carcinoma. It has been shown, at least in a limited number of cases, that carcinoma remains intra-epithelial (in situ) for 7 to 8 years before invasion occurs. If this is true for all carcinomata of the cervix and if women were examined annually by the use of 2 slides, the pathologist would have 14 to 16 chances of making an early diagnosis. This should minimize the possibility of error. Furthermore, if this could be done on a large scale, the age incidence of carcinoma of the uterus would be somewhat lower than at present.

The diagnosis of carcinoma by vaginal smear, however, is not as easily accomplished as has been indicated and depends on several factors, some of which are:

1. The fact that some carcinomas apparently do not shed cells continuously.

2. The fact that considerable degree of proficiency is necessary in taking, preparing and staining specimens. Many smears prepared by the beginner show an inadequate number of cells or large quantities of mucus. A report on such a series of slides is unfair to the patient, the clinician, and the pathologist.

3. Method of staining. Papanicolaou's staining methods are excellent but require a certain amount of special training. Hematoxylin and eosin stains appear to be best for a pathologist who is accustomed to seeing this stain routinely. It is also less costly and less time-consuming.

4. The proficiency of the pathologist. The fate of any woman with an early carcinoma may depend entirely on the acuity of the pathologist. No pathologist should attempt to read vaginal smears until he has had a long period of supervised training in this field.

A recent article by Graham[3] indicated that by serial vaginal smears patients receiving irradiation can be followed and an accurate prognosis can be established. The short follow-up on these irradiated cases necessitates caution in the accurate evaluation of this procedure. Cancer cells may disappear from the endometrial cavity and the superficial surfaces, but this is absolutely no assurance that there are not viable tumor cells deep in the myometrium and in the adjacent lymphatics and lymph nodes. More time and additonal follow-up data will be required for the proper evaluation of this procedure in the prognosis and treatment of uterine cancer.

The vaginal smear is a valuable method in the detection of early carcinoma and has a definite place in large clinics where pathologists devote their entire time to this specialty. It is not practical, however, for the average pathologist or gynecologist. When Gates and Warren[8] state that it takes the pathologist from 4 months to a year to obtain proficiency in diagnosis, and when it is known that in some cases of carcinoma there are no cancer cells seen on repeated smears, it appears that recent articles on "Cytology Tests" in women's magazines are perhaps a bit overenthusiastic.

SUMMARY

A preliminary report on the institution and use of the vaginal smear method in the diagnosis of uterine cancer in a cancer prevention and a cancer treatment center has been presented.

The application of the method in the diagnosis of asymptomatic and unsuspected cancer of the uterus and in the selection of radio-resistant cervical cancer has been shown by illustrative case reports.

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NEURITIDES OF MECHANICAL OR PRESSURE ORIGIN

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THE subject may well be introduced by reciting the stories of two patients which illustrate many of the points to be discussed.

Case 1.—A woman aged 27 years was referred from the outpatient department of a general hospital for neurologic evaluation. She complained of severe pain in the right hip with sciatic-like radiation and weakness in the right lower extremity of 3 weeks' duration. On October 23, 1944 she was admitted to the obstetrical department of a civilian hospital. The patient had a prolonged and difficult labor and was in the delivery room for a period of 2 hours, during which time she was kept in the lithotomy position with her legs suspended in V-shaped stirrups and strapped both above and below the knee. She was most uncomfortable while in this position because of severe pain in the right hip with radiation of sciatic character and a numbness, tingling, and pins-and-needles sensation of the entire right lower extremity. There was a considerable amount of moulding of the head due to the large size of the baby and the smallness of the birth canal, and forceps were necessary to facilitate delivery.

When the patient was returned to her room following delivery, she complained bitterly of severe pain in the right leg and a feeling of numbness and heaviness with inability to move the limb. Within 2 days the numbness disappeared in the thigh and leg but remained in the foot. There was slight motion of the flexor muscles of the leg and of the adductor muscles on the third day, but it was not until the tenth day that the patient was able to move the foot or toes. There was constant severe pain, sciatic in distribution, during this time. The patient stated that the pain was aggravated by muscle activity producing extension of the leg or by dorsiflexion of the foot, or by lying or sitting in a position favoring pressure in the region of the right buttock. The pain was relieved by assuming the upright position.

Neurologic examination revealed a grade 2 hypesthesia to all forms of sensation of the right foot, with the exception of a small area on the medial aspect corresponding to the long saphenous nerve, a branch of the femoral nerve. There was a grade 3 weakness of dorsiflexion and eversion, and of extension of the proximal phalanges of the toes of the right foot. There was a grade 2 weakness of plantar flexion and inversion of the foot and flexors of the leg. The right Achilles reflex was absent, and the patellar reflexes were normal. No pathologic reflexes were elicited. Kernig's and Lasègue's signs were strongly positive. The patient could extend the leg but was unable to dorsiflex the foot without producing severe pain. There was extreme tenderness in the region of the sciatic notch, as well as along the course of the sciatic nerve, including the common peroneal and posterior tibial.

The diagnosis was neuritis, sciatic nerve, right, sensory-motor, severe, secondary to abnormal posture with pressure factors, incident to delivery.

Discussion.—It is felt that the mechanism of the pressure neuritis in this instance is complicated by several factors, namely, the pressure of the head and application of forceps incident to delivery, together with the lithotomy position with tight strapping in the region of the lower thigh. That the sciatic nerve was injured by virtue of direct pressure as well as traction or tension pressure, and that there was direct involvement of the sciatic trunk are attested to by the fact that there was flexor weakness of the leg and adductor weakness of the thigh. The muscles innervated by the common peroneal nerve were more severely involved than those innervated by the posterior tibial nerve. This is the usual story, and the explanation of the difference in degree may be due to the fact that the fibers in the sciatic trunk that go to make up the posterior tibial nerve may be more centrally placed and therefore less vulnerable to pressure factors than are the more superficially placed common peroneal fibers.

This case represents a good example of a mechanical or pressure neuritis so commonly observed following operation. Clinically, the objective neurologic findings showed excellent localization, both sensory and motor components, relative to the sciatic nerve.

A régime of therapy similar to that outlined in this article was carried out, and at the time of discharge from the hospital 3 weeks later considerable improvement was noted. Following discharge as an outpatient 2 months later, the patient made a complete recovery relative to the sensory component and an estimated 90 per cent return of motor function.

Case 2.—A man aged 37 years was admitted to the hospital on March 12, 1943, complaining of progressive weakness of the left hand of 18 months' duration. In the fall of 1938 the patient developed a papular, vesicular eruption of the left thumb. It was very resistant to treatment and spread to the middle and index fingers of the left hand. The dermatitis was of a progressive nature and at no time showed signs of improvement. Associated with the eruption, the patient had experienced numbness, tingling, pins-and-needles sensation limited to the thumb, middle, and index fingers of the left hand. No causative factor for these changes was ever found. When the patient first reported for examination, prior to entering on active service, he was rejected because of this chronic dermatitis of the left hand. In June, 1942, the condition was waived and he entered on extended active duty in a limited service capacity. Since that time he noted an increase in the numbness and tingling sensation, associated with gradually increasing weakness of the left hand. About the same time, in addition to the paresis and paresthesia, the patient experienced intermittent periods of throbbing, pulsating, and burning pain, limited to the 3 fingers and the palmar surface of the left hand, corresponding to median nerve cutaneous innervation.

Since the patient's duties as a dental officer required a considerable amount of use of the left hand, he was incapacitated to a great extent because of the weakness of the hand, and it finally became necessary for him to enter the station hospital on March 2, 1943, for study. A complete medical work-up at the hospital failed to reveal a cause for his condition, and he was transferred to a general hospital on March 12, 1943 for further observation and treatment, with the diagnosis of neuritis, unclassified, acute, moderate, median nerve, left, cause undetermined.

The complaint on admission to the general hospital was weakness, paresthesia, and pain in the left hand, with chronic dermatitis. In addition to the history already referred to, the patient stated that he had been seen by many physicians and at various clinics for a period of 5 years and that, although no definite diagnosis could be given as to the causative agent, numerous conditions were considered, namely, contact dermatitis, chronic eczema, syringomyelia, leprosy, neuroma, and scalenus anticus syndrome.

Except for the neuritic findings referable to the left hand, the physical examination was completely negative. The neurologic examination revealed a grade 2 paresis of the abductor and opponens of the left thumb, and a grade 1 paresis of the flexors of the index and middle fingers of the left hand. There was grade 1 atrophy of the thenar eminence. A grade minus 2 to minus 4 hypesthesia to all forms of sensation corresponding to the cutaneous innervation of the median nerve was elicited. Slight friction in the hypesthetic areas caused a burning type of pain similar to the pain that the patient complained of. The nails of the thumb, index, and middle fingers presented a furrowed, brittle and cracked appearance, and the skin of the left hand, corresponding to the median cutaneous innervation, was dry and glossy, and toward the end of the fingers there were islets of vesicular, papular, and macular eruptions. Digital pressure on the median nerve in the region of the anterior annular or transverse ligament produced the causalgic type of pain which was previously referred to.

The diagnosis was neuritis, median nerve, left, incomplete, moderate, chronic, 'pressure neuritis' ("occupational" or 'dental neuritis').

Since it was felt that this patient's neuritis had progressed to the point where he could not have benefited sufficiently from surgery to permit him to carry on efficiently in the armed forces, and in view of the fact that his illness was not in line of duty, he was retired, and it was explained to him that a simple surgical procedure such as cutting the transverse ligament and making a new bed for the median nerve at that point would prevent progression of the neuritis, which would enable him to carry on fairly well with his practice in civilian life.

Discussion.—This case, although relatively simple from an etiologic standpoint, nevertheless presented quite a diagnostic problem for many years, chiefly due to the fact that the simplest cause relative to this nerve in this particular patient was completely overlooked because the possibility was not kept in mind. The same is true of mechanically induced neuritides ("pressure neuritides") incident to occupational, recreational, or postural factors. In this specific case the cause was of an occupational character.

In the incipient phase of this patient's illness, a dermatologic problem presented itself. Later, however, with the development of paresthesia and paresis, a neurologic condition was considered with many of the diagnostic considerations, most important of which were syringomyelia, cervical rib, neuroma, and anesthetic leprosy. In syringomyelia, however, the clinical picture is somewhat different, there being a segmental involvement with loss of pain and temperature but retention of touch, a true dissociation of sensation. Later there appear fibrillations with atrophy and trophic changes. The cervical rib or scalenus anticus syndrome is characterized by pain as the outstanding symptom. This is usually aggravated or precipitated by factors producing or favoring extension or retraction of the shoulder or elevation of the arm above the horizontal. Later, the paresthetic weakness and atrophy occur, the X-ray film usually shows an accessory rib or an enlarged transverse process of C-8, and the radial pulse is usually obliterated. In the case of a neuroma, one usually elicits the history of trauma, either accidental or surgical, or a tumor mass may usually be palpated. Pain is the outstanding symptom, and it may be very severe, aggravated, and precipitated by pressure over the tumor mass or in the region of the scar. Anesthetic leprosy presents quite a problem at times, particularly when the pathology involves one nerve and trophic changes appear early. The sensory component of the involved nerve is more severely affected than is the motor, and there is usually a pronounced dissociation of sensation, touch being more involved than pain and temperature in the early stages. The sensory changes are usually confined to the limits of the trophic changes, which usually are islet-like or patchy in distribution. There is usually a thickening of the nerve trunk, and occasionally nodules may be palpated. The histamine skin test is negative, and the bacillus may occasionally be found on tissue biopsy or scraping from the lesion. I once saw a case of leprous neuritis involving the median nerve which presented a clinical picture quite similar to the case discussed in this report. The patient was treated for many months as a dermatologic case, and finally a tissue biopsy showed numerous Hansen's bacilli. The early stages of amyotrophic lateral sclerosis, in which the disease starts with the small muscles of the hand, should not offer too much confusion, since there is a combined upper and lower motor neuron involvement producing increased deep reflexes, and fibrillations and pain and sensory changes are uncommon. The same may be said for chronic poliomyelitis, in which, however, the reflexes are diminished or lost. Cord tumor, cervical arachnitis, or pachymeningitis and myelodysplasia should not be particularly difficult to eliminate.

MECHANICALLY INDUCED NEURITIDES

Mechanically induced neuritides, "pressure neuritides," make up a large percentage of the etiologic types of neuritis seen by the clinician. From the standpoint of the pathogenesis of this condition, three different types are worthy of consideration, namely, occupational, recreational, and postural (abnormal or awkward position of a limb). The condition nearly always manifests itself as a mononeuritis which may have either a gradual or a sudden onset and in which paresis or paralysis is usually the most important symptom. This may be of a very mild, moderate, or severe nature and fleeting character, or it may be of a more prolonged and permanent nature. The nerves most often involved are the radial, ulnar, and median in the upper extremity, and the sciatic and peroneal nerves in the lower extremity. The pressure is usually chronic and intermittent but may be of very short duration and continuous before the motor units of the nerve trunk are involved. The most important single consideration on which to base the diagnosis of a pressure neuritis is in the eliciting of a detailed history with reference to the symptoms presented by the patient and in the consideration of occupational, recreational, and postural factors. The second most important factor is that it is a mononeuritis and that it almost invariably involves one of the five previously mentioned nerves; and third, recovery usually occurs if the offending activity is discontinued.

The largest group, by far, fall in the occupational class. The most important occupation alists of this class are dentists, pressers, tailors, carpenters, cigar-makers, jewelers, barbers, seamstresses, mail-sorters, lithographers, miniature painters, machinists, waiters, stenographers and typists, flute players, violinists, pianists, trap drummers, chauffeurs, milkers, floor scrubbers, teamsters, gardeners, corn huskers, foundry ladlers, motorcyclists, oyster sorters, artists' models, and soldiers. To these occupational classifications descriptive terms have been applied to specific palsies, for example, dental neuritis (median); coach-driver's palsy (radial); chauffeur's neuritis (sciatic); "flounder foot" occurring in oyster sorters (peroneal); milkmaid's palsy (median); carpet-maker's or tailor's palsy (peroneal); gunsling palsy found in soldiers and analogous to tourniquet palsy, affecting usually the radial nerve but at times the ulnar and median nerves as well. I have seen 4 of these cases, 1 in which the radial nerve only was involved, and the other 3 in which all 3 nerves were involved, the radial being more severely involved in each case. Complete recovery occurred in each instance.

Finally, jungle-boot palsy, which is not an uncommon cause for neuritis of the common peroneal nerve, is found in soldiers who wear this particular type of boot in certain theaters of operation. The nerve is exposed to compression factors as it leads around the neck of the fibula. The posterior tibial nerve is usually mildly involved in this type of pressure neuritis. This type of neuritis is comparable to gunsling palsy, in that it affects chiefly the radial nerve in the upper extremity.

The second group, or recreational neuritides, are largely a result of acute trauma in which the nerves are crushed, lacerated, stretched, or torn. It is not, however, within the scope of this paper to include this type in the discussion, since they are outside the realm of true mechanical neuritides. In this category may be mentioned median neuritis in motorcyclists from gripping the handle bars too tightly. The tibialis nerve may be injured in skiing, the peroneal nerve in hockey, skating, or stilt walking, and the ulnar nerve in violin playing, bicycling and rowing, as well as in wrestling as a result of crouching on the mat. Radial and peroneal palsy occurs in golfers and radial palsy in orchestra conductors.

The last group in the discussion, namely, neuritis of a postural origin, presents quite a large group for consideration. The majority of these develop during sleep, either natural or induced, but some are due to postural habits. In all instances there is an awkward or abnormal position of the limb in relation to the joint, or particular nerve relative to its contact with another object. The nerves most commonly affected are the radial and peroneal, and those less often affected are the ulnar and sciatic.

The patient may fall asleep with his arm hanging over the back of a chair ("Saturday night radial palsy" or "park bench palsy"), or resting on an arm chair (the so-called "arm chair" or ulnar palsy). He may also fall asleep with his arm lying on a table and his head resting on his upper arm, or the head of another may lie on his arm, leading to the so-called "bridegroom's paralysis." Both are cases of radial paralysis. People who are forced to use crutches often develop "crutch palsy" from compression of the musculospiral nerve. During surgical anesthesia the limb may be allowed to depend over a table edge, resulting in a radial palsy.

Any occupational or professional movements or attitudes entailing pressure at the elbow, or requiring it to rest on a hard surface, may result in ulnar palsy. This is commonly found in students who work for long hours with the head leaning on the hands and elbows bent on a table. It may also occur in telephone operators. In the lower extremities the practice of sitting for long periods of time with the knees crossed may result in peroneal or crossed-leg palsy. The habit of sitting for long periods of time on the edge of a hard chair may, at times, result in sciatic neuritis. Another bad postural habit is that of sitting with the legs outstretched with both thighs externally rotated and the feet crossed in such a manner that the lower foot is completely inverted and the lateral surface is resting on the floor, resulting in superficial peroneal palsy. During natural sleep abnormal attitudes, too soft or bunchy a mattress, or heavy covers may favor the development of pressure neuritides involving chiefly the ulnar, radial, or peroneal nerves. This may occur also in people who are confined to bed for long periods, or in individuals who have lost a considerable amount of weight as bed patients. The nerves most commonly involved in these cases are the ulnar and the peroneal.

The diagnosis of neuritis of postural and recreational origin, as in the occupational group, is based on the history of the particular circumstances under which the palsy occurred. The prognosis, for obvious reasons, is extremely poor in the occupational group unless the offending activity is discontinued. In the recreational group, however, there is a much better prognosis, since the offending activity is engaged in only at periodic intervals. The postural group can be controlled to a large degree if the old habit is discontinued and if good nursing care is administered to the bed patient or the patient who is unconscious, or under surgical anesthesia. As for the palsies incurred during natural sleep, bed clothing affording the maximum amount of warmth with the minimum amount of weight should be used, as well as a hard, smooth mattress.

Treatment of Pressure Neuritides

The treatment of neuritides of occupational, recreational, and postural origin differs in little respect from neuritis as a result of a toxic or infectious process.

It should be emphasized that when the term neuritis is applied to nerve involvement due to a pressure phenomenon it does not denote the presence of an accompanying toxic or infectious process. The term is descriptive and has the sanction of common usage, and so far as concerns axon, myelin sheath, Schwann cells, and neurolemma, changes consecutive to trauma do not differ categorically from those of parenchymatous neuritis (i.e., toxic degeneration), while reparative processes are virtually identical. Therapy, however, in the mechanically induced group of neuritides does not concern itself with the eradication of toxic or infectious foci unless it should be an incidental accompaniment.

The therapeutic régime should consist of measures directed toward the alleviation of the symptoms. The symptoms consist of sensory, motor, and trophic factors, any one of which may appear singly or in combination. Pain and paresthesias can be controlled by use of the sedative and analgesic drugs. Thiamin chloride in 50 mg. doses intravenously or intramuscularly daily, and dry heat or diathermy may be used. Rarely, intractable pains may require sympathetic block or sympathectomy, injection of the nerve with procaine, or section of the posterior root. The severely paralyzed muscles require special mechanical devices for support to prevent contractures and deformities, as well as to protect the muscle from strain and thereby facilitate recovery.

Massage should be instituted as soon as the acute sensory symptoms (pain and tenderness) have subsided. Diathermy, galvanism, and passive motion followed by active motion, as well as graded exercises and whirlpool baths, are used as progressive improvement in the muscle occurs.

Treatment should also be directed toward the protection of the affected parts from injury or infection, and measures to afford adequate circulation, such as vasodilating drugs, foreign protein injections, and sympathectomy in selected cases should be used when a vasospastic element is demonstrated. Cocoa butter or bland oil rubbed on the skin in the affected areas prevents cracking, and local antiseptics are used to prevent infection. If ulceration occurs, the treatment is the same as for any other ulcer.

The patient's general condition should not be neglected. A well balanced diet and myelin protective drugs, e.g., vitamin B_1, liver extract intramuscularly, and iron orally, are used as indicated.

In the more chronic cases strychnine may be administered, beginning with $\frac{1}{30}$ grain and gradually increasing to $\frac{1}{10}$ grain t.i.d. This therapy may be continued for months if necessary. Potassium iodide, 10 grains t.i.d. each alternate week, may facilitate recovery. Undue exertion and exposure to cold should be avoided.

It may be said that successful treatment takes account of certain principles which can be laid down for practical guidance: (1) removal of the determining factor when known and amenable to therapy; (2) provision of rest to the affected parts; (3) maintenance of neuromuscular nutrition as far as possible by warmth, massage, and electric modalities; and (4) prevention of deformities and other sequelae due to contractures, adhesions, fibrous growth, arthritic change, and trophic lesions, generally.

Finally, it should be stressed that once a mechanical neuritis has been diagnosed and the exact origin determined, the manner and nature of its development should be explained to the patient and the necessary prophylactic measures taken to insure against a recurrence. Prophylactic therapy is the key therapeutic measure that can be instituted in this particular group of neuritides. In obstinate cases manifested by a chronic, prolonged cause with frequent recurrences, it may eventually be necessary to change to another type of occupation or adopt another recreational activity; or transplantation of the nerve to a fresh bed may be necessary.

In cases of permanent paralysis a neurolysis may prove efficacious, or it may be necessary to perform a muscle and tendon transplant to improve function.

The importance of a detailed history referable to the circumstances under which a palsy of the radial, ulnar, median, sciatic, or peroneal nerve develops cannot be stressed too much. If the etiology of a neuritis of one of these nerves is obscure, the history may enable the clinician to arrive at the diagnosis of a "mechanical or pressure neuritis" of occupational, recreational, or postural origin, and steps toward the adoption of the necessary prophylactic measures can be taken to insure a more rational approach to this interesting and important group of cases.

A TOOTHPICK IN THE PERITONEAL CAVITY
Report of a Case

WILLIAM J. B. ORR, M.D.
Washington

THE question of foreign bodies in the peritoneal cavity has been discussed at length by various writers, and a very thorough account appears in the *Archives of Surgery* for October, 1947 by Thomas J. Snodgrass of Janesville, Wisconsin. In his extensive article he gives numerous reports from the literature covering the last 30 years, and his article deals particularly with wooden toothpicks. He brings out the fact that most of these cases are diagnosed as "acute abdomen" and that most of the cases are thought to be acute appendicitis before surgery is done. The most frequent conditions noted were: (a) acute peritonitis, (b) localized intestinal abscess, (c) intra-abdominal inflammatory tumor, (d) inflammatory tumor of the abdominal wall, (e) abscess of the abdominal wall, and (f) inflammation and obstruction in a hernial sac. He brings out the point that most objects swallowed with a blunt point pass through the intestinal tract without injury to the patient. Perforation of the bowel is frequent in cases of patients swallowing toothpicks, and the most common sites are the duodenum, the ileum in the region of the ileocecal valve, and the colon, the ileocecal region being the most common site. The toothpick is usually taken into the intestinal tract unknowingly as it accompanies the martini, the manhattan, the old-fashioned, the canape, and the club sandwich. Patients having artificial dentures with the loss of sensory stimuli in the roof of the mouth and gums are the ones most frequently ingesting unknowingly a foreign body in a morsel of food.

REPORT OF CASE

A white, middle-aged lady, was admitted to the Doctors Hospital on November 14, 1947 with all the symptoms of an acute "surgical abdomen," most probably an "acute appendix." The total leukocyte count was 11,800 with 92 per cent polys. She had been nauseated but had not vomited and there was only a slight elevation of temperature. This lady had been to Little Rock, Arkansas and was driving back with a friend in an automobile, when they had some club sandwiches in a hotel room in Memphis on November 5, 1947. These club sandwiches were held together with toothpicks. She does not remember swallowing a toothpick at the time the sandwiches were consumed but states that this was the only place she could have ingested one. She apparently had no discomfort from the toothpick until the early morning of November 14 after she had eaten breakfast. There was some pain and discomfort with some nausea, and she made an appointment with her physician for an examination, stating that she could not straighten up and was in pain all through the abdomen when she walked.

I operated on her about 6:30 p.m., November 14, 1947, making a right rectus incision in order to explore the gallbladder and stomach as well as the appendix, and as soon as the examining hand was placed into the peritoneal cavity and swept around a toothpick was found lying free in the peritoneal cavity in the region of the cecum. The toothpick was intact; it was a round toothpick, the type usually used in club sandwiches, and the omentum ("policeman of the abdomen") had not wrapped itself around the toothpick, but there was free peritoneal exudate which was foamy and slightly blood-tinged and a general peritoneal irritation. The intestinal tract was examined hurriedly for the site of the perforation, but it was not found. The appendix was inflamed and was removed at the same time. The abdomen was closed without drainage, and the patient was treated as any other case of peritonitis with supportive treatment. Small sips of water by mouth were given, intravenous therapy instituted, and the patient given blood transfusions, streptomycin, and penicillin. Recovery was uneventful except for a stitch abscess.

Cases of foreign bodies perforating the intestinal tract causing obstruction, abscesses, or peritonitis are not frequent but should be considered a possibility when a perforated ulcer, "acute gall-

(*Continued on page 310*)

President's Page

EMERGENCY MEDICAL SERVICE

Recently the AMA's Council on National Emergency Medical Service held a most important session in Chicago. Representatives of state medical societies, the armed services, and other national health groups were present The primary purpose of this meeting was to formulate plans on a national leve for meeting the medical needs of the Nation in the event of national catastrophe or war.

The Council's proposed program is designed to conserve the medical strength of the Nation; it affirms that the physician-civilian population ratio reached in the last War was too low and that it should never, needlessly, be reached again. It further resolved that the present proposed legislation for the draft in which physicians, dentists, and veterinarians up to the age of forty-five years were singled out for special selection and induction into the armed forces was discriminatory and a reflection on the patriotism of the members of these professions.

The position taken in this resolution should be upheld by every physician and should be brought vigorously to the attention of the legislators. Certainly, no group in the country filled its role in World War II better than the medical and allied professions did, and the proposed legislation evidences an unwarranted lack of faith in their ability and willingness to do it again.

Our Society was represented at the meeting by Dr. A. Clagett Gray, Chairman of the Committee on Emergency Medical Care. We are taking the lead in this community in formulating plans, in so far as is possible, to meet any emergency which may arise.

Raymond T. Holden

Editorials

THE NEW ERA OF MEDICINE*

Medicine has passed through many eras, from the ancient empirical study of disease to the scientific study of man and his environment. Each era has added to the vast knowledge on which our present complex practice of medicine is based. Yet even today we do not have enough basic knowledge of man in health and disease to provide for him a longer and more satisfying life. Although we are in an era of expanding research, we recognize that more extensive investigations, both fundamental and applied, are vitally needed.

We are particularly dependent on research for knowledge about the chronic degenerative diseases—killers and cripplers which are on the increase and which already are taking the heaviest toll of life and health from our population. Estimates indicate that by 1970 one out of every 10 Americans will be 65 years of age or older, but too little study has been given to the healthy adult and to the diseases likely to afflict him.

We have only just started to apply widely our knowledge of cancer and to intensify our search for better means with which to detect and treat malignancies. We have barely started to explore the cardiovascular diseases. Research and application still lag in other major causes of death and ill health among adults: cerebral hemorrhage, kidney diseases, diabetes, arthritis, and rheumatism. Mental illness, the most widespread serious ailment of our time, needs much more study than it has hitherto received.

It is possible that we shall not be able to define clearly what adult health should be until we learn more about the chronic degenerative diseases and until we attempt to apply our knowledge to more of the adult population. You will recall that it was not until we had made considerable progress in the control of childhood diseases that we could undertake the important study of the whole child and thus come to an understanding of healthy childhood. Child health is now a positive, defined objective—even though we have not yet attained health for all our children.

Reaching an equivalent advance in the area of adult health will require, first of all, close coöperation among all groups concerned with the problem. Such coöperation is already well developed in the research field, but it must be continually strengthened. The recent expansion of Federal research, for example, cannot make its full contribution to the advancement of medical science unless there is comparable expansion in research conducted in non-Federal institutions.

The profession can exert a powerful influence on research by aiding in the development of a better balanced program. At present, for every death due to cardiovascular diseases, only $5 is invested in research upon these causes of death, whereas $100 is invested in research on infectious diseases for every death they cause. This does not mean that too much is being spent on infectious disease research, but it does mean that not enough is spent for heart disease research. This is particularly apparent when we remember that, without new knowledge, we cannot hope for a major reduction in the half million deaths caused annually by cardiovascular diseases and the nearly 200,000 caused by cancer, whereas we have a sufficient body of knowledge to prevent about 100,000 deaths due to certain communicable diseases.

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* This is the twenty-sixth in a series of guest editorials by distinguished physicians and laymen.

There is little excuse for failure to control venereal diseases, tuberculosis, malaria, whooping cough, diphtheria, typhoid fever, the dysenteries and several other acute infections I could mention. We have the medical and public health means; we have organized Federal-state, voluntary and official coöperative programs for applying the means.

In this field too, however, victory depends upon closer coöperation, not only between the medical profession and the public health agencies, but also among the many other groups and individuals whose participation is essential to the success of control programs.

Fortunately, I believe professional and civic leaders understand today, better than ever before, that they must work more closely with each other in planning and operations to improve health and medical services of all types.

As I embark upon my term as Surgeon General of the U. S. Public Health Service, I consider it to be one of my first duties and privileges to foster coöperation between this organization and our colleagues in the professional societies and faculties, in the voluntary and philanthropic organizations, and in all other Federal, state and local agencies interested in health and medical service.

The health of the American people and their resources for maintaining health cannot and must not become a monopoly—either of governments, private enterprise, charitable agencies, or professional organizations. Each of these great institutions has made incalculable contributions to American health. They must continue to work together and must grow in wisdom, strength and efficiency.

LEONARD A. SCHEELE, M.D.
Surgeon General, Public Health Service, Federal Security Agency

WORLD HEALTH ORGANIZATION

The World Health Organization is at last in being—without the United States' membership! To everyone seriously interested in the field of international public health such nonparticipation is bound to seem both puzzling and lamentable.

This country took a position of leadership in the establishment of the United Nations—the Charter was adopted in San Francisco, the headquarters are to be in New York City. Various subsidiaries were planned to deal with special topics, such as education, labor, and health, these to be operated as interim commissions until a stated number of signatories of the United Nations Charter had officially signified their agreement to become members. The Interim Committee of World Health Organization, under the brilliant leadership of Dr. G. Brock Chisholm of Canada, has been busily at work. In spite of its interim nature, it has accomplished much already in a number of countries in the fights against tuberculosis and malaria; it has wisely expended large amounts of money provided by UNRRA in child health work; and it is entitled to sole credit for stamping out a recent serious epidemic of cholera in Egypt. These accomplishments are but samples of the valuable contributions possible through international coöperation in public health.

A year ago the Senate voted favorably on participation by the United States but so far the Rules Committee has not brought the matter before the House for a vote. In the meantime, by the vote of Soviet Russia and two small countries the necessary number of signatories has been achieved, and the World Health Organization is a reality.

If any aim is nonpolitical and noncontroversial it is that of improved public health. Particularly in these days, when travel has been immeasurably speeded up, the prevention of communicable disease has become so urgent that it is incumbent on every country, be it a democracy, monarchy or totalitarian dictatorship, to contribute its share in the prevention of illness and the promotion of the general health, physical and mental.

The United States has done probably more than any other nation in the field of preventive medicine. It is now, unfortunately, too late for it to become a charter member of World Health Organization. The membership roll is still open, however; if this country does not soon sign the list it will fail sadly and conspicuously in fulfilling its responsibility to the world and to itself as a significant leader in the field of international health.

W. O.

CANCER OF THE THYROID

In the present day blitzkrieg warfare on cancer, the recognition of premalignant and early malignant lesions is being given its deserved emphasis. Funds are being liberally allocated for the operation and maintenance of cancer detection centers and tumor clinics throughout the country. However, it would seem that a step further in a more fundamental direction is desirable as a part of this program. No number of detection centers will ever obviate the fact that the great bulk of patients with premalignant and early malignant lesions are first seen by their private doctor, and it is he who should be bombarded with information and facts concerning the early detection and significance of these lesions.

At the present time the patient with a nodule in the breast or one in whom a polyp of the rectum is identified is almost invariably advised that immediate extirpation of the lesion is mandatory in view of its potential neoplastic character. The same cannot be said, however, for one who is found to have a nodule in the region of the thyroid gland. All too often the patient is advised that this tumor should be watched and if rapid growth ensues or signs of thyrotoxicosis present, something may be done at that time. The fact is that the medical profession is not completely aware that a nodule in the thyroid gland has a greater chance of being or becoming neoplastic than a nodule in the female breast.

That cancer of the thyroid is not a rare condition is attested by the numerous reports of large series of such cases from various clinics throughout the country. In surveying the pathologic material from approximately five hundred cases, secured from three local hospitals, that had been subjected to thyroidectomy on the clinical diagnosis of adenoma of the thyroid, carcinoma was identified in approximately five per cent. This incidence is in conformity with numerous other reports and less than that reported by some. In reviewing the clinical features of these cases, it is evident that one should not be beguiled into a false sense of security by the fact that the tumor has remained of stationary size, that it is not fixed, or that there are multiple tumors. However, a solitary tumor showing growth, with fixation, is certainly to be viewed with greater suspicion.

The neoplastic character of so-called aberrant thyroid nodules found along the anterior border of the sternomastoid muscle has been stressed by Lahey. However, it would seem from subsequent studies that these lateral aberrant thyroids are in fact metastases to the cervical lymphatic chain from clinically undiscernible lesions of the thyroid gland itself. This fact is somewhat frightening to those of us interested in the early diagnosis of cancer of this gland.

Surgical extirpation of every and all nodules in the thyroid gland is a sound surgical practice. The gross features of the excised nodule should be inspected immediately on its removal and suspicious areas of induration should be checked by frozen section. In the event that an unsuspected carcinoma is identified at this time, total extirpation of the involved lobe and isthmus should be carried out. Occasionally early carcinoma in an adenoma will be identified only on study of the fixed histologic section, and in this circumstance the decision to re-operate the patient for removal of the entire lobe will rest on the degree of malignancy, penetration of the capsule, and upon the amount of normal gland excised with the nodule.

Another common misconception is that carcinoma of the thyroid does not constitute a favorable surgical lesion. This notion undoubtedly stems from the proximity of the gland to the vital structures of the neck. However, the opposite is true. Cancer of the thyroid is in the majority of cases of relatively low-grade malignancy and is slow to metastasize. This is borne out by the fact that a high percentage of surgical cures follow radical resection of the neck in cases in which the regional lymphatics are involved, and by the fact that recurrences may become clinically evident as long as fifteen years after the initial lesion has been identified or removed. Consequently, the labeling of any case of carcinoma of the thyroid as inoperable should be viewed with skepticism and subjected to critical analysis. The ten-year cure rate in those cases in which the lesion is grossly confined to the gland itself compares favorably with the same cure rate for any neoplastic disease of the body.

Finally, a note of warning should be sounded with regard to the indiscriminate use of the newer anti-thyroid drugs. The potential carcinogenic action of thiouracil and propylthiouracil has been demonstrated experimentally, and its prolonged use in the presence of an adenoma of this gland is clearly objectionable.

ROBERT J. COFFEY, M.D

In and Out of Focus

BY THE OBSERVER

Davidson Portrait Ceremonies

There have been few occasions at the Medical Society building more impressive than the unveiling of the portrait of Dr. E. Y. Davidson. The event took place preceding a scientific program presented by the Washington Academy of Surgery on April 14. A large audience composed of Society members and personal friends of Dr. Davidson was on hand.

Dr. Coursen B. Conklin, Chairman of the Davidson Portrait Fund, who presided, opened the unveiling ceremonies, speaking briefly about Dr. Davidson and his accomplishments. He was followed by Dr. John Benjamin Nichols, senior living Past President of the Society, who, in his usual scholarly manner, described Dr. Davidson's contributions to the Society. Dr. Nichols said:

"It is a compliment and a pleasure to me to have been invited on this occasion to express the sentiments of esteem and affection entertained toward Dr. Edward Y. Davidson by his many friends and associates, even though anything that I might be able to say in his praise would be an understatement.

"There are many facets in Dr. Davidson's character and personality for which we admire and honor him; but the uppermost theme at this time is the recognition and appreciation of the epochal and pivotal service which he rendered to the Medical Society of the District of Columbia in bringing about the erection of this, the Society's home building. More than a quarter of a century has elapsed since the building has been completed and occupied; and during that time a whole generation of new members have joined the Society, who may take our building for granted and as a matter of course, unmindful of the struggle and effort and labor pains that were involved in its procurement.

"It was due to his special type of mind that Dr.

Drs. E. Y. Davidson, C. B. Conklin and John B. Nichols examine the portrait of Dr. Davidson painted by Bjorn Egeli (left).—*Courtesy of Evening Star*

Davidson was enabled to conceive and achieve the construction of the building. Dr. Davidson has a poetic soul; his mind dwells in the realms of idealism and spirituality; he has insight in the inwardness of things. Through these traits he conceived a vision of providing a suitable home for the service of the Society. In his presidential address in December of 1916 he first presented the project to the membership, with the eloquence, impressiveness, and poetic spirit characteristic of him.

"If the matter had ended there, Dr. Davidson would have been just another visionary. But it did not end there. He was a doer as well as a seer. He not only saw the invisible, but he transformed it into reality. Dr. Davidson had not only spiritual insight, but also the indomitable will power needed to push the enterprise to successful completion. There were many difficulties. On account of the dearth of labor and materials incident to the first World War, it was an unpropitious time for building. There were conservatism, skepticism, opposition, indifference, apathy in the membership. The obstacles seemed insuperable. But with tireless energy Dr. Davidson inspired enthusiasm and fervor, pushed the project, and in spite of all he achieved the impossible. He modestly minimizes his own part in the enterprise and generously magnifies that of his helpers; but nevertheless he was the indispensable man; without him this building would not be in existence, and to him we are overwhelmingly indebted for its procurement.

"The building was completed in the year 1920, and was occupied in 1921 during the presidency of Dr. Henry C. Macatee, with a dedicatory address by Dr. William Gerry Morgan, and prominent participation in the exercises by Dr. Charles W. Richardson, who next to Dr. Davidson rendered powerful aid in the building effort.

"The possession of the building has exerted powerful and epochal influence toward the welfare and betterment of the Society. It is a structure of architectural dignity and elegance, creditable to the profession and the city. It is a habitation, headquarters, and home for the Society. It affords facilities and conveniences for the transaction of its business and affairs. It has enhanced the prestige and influence of the Society, and promoted the solidarity and *esprit de corps* of its membership. In a speech in 1943 Winston Churchill said, 'We shape our buildings and afterwards our buildings shape us.' That, in a nutshell, is the story of our building.

"Keenly mindful of its indebtedness to him, the Society has been pleased to render to Dr. Davidson testimonials of recognition, appreciation, and gratitude for his great services in its behalf. The memorial Davidson Lectureship, endowed in 1929, has been in operation since, and should be a perpetual institution. In 1941 he was given a citation for his meritorious service to the Society, the first in that series of awards. And again, at the present time, with unabated appreciation, the Society has been pleased to procure for itself the wonderfully fine portrait of Dr. Davidson which has just been unveiled. This will be a cherished treasure among the Society's possessions. It will be prominently displayed in the building as a permanent pictorial memorial for untold future generations to gaze upon with reverence and respect, long after all of us have passed from the scene.

"But perhaps his greatest memorial will be this building itself. In the words of the famous inscription in Saint Paul's Cathedral to Sir Christopher Wren, the architect of that building, we can say, 'If you seek Dr. Davidson's memorial, look around you.' "

Dr. Davidson responded most graciously, and in the course of a brief statement said, "When I look at the portrait, I shall be moved by a greater effort to be humble and simple and kindly. When others look at the portrait, I trust that they will realize, as never previously, the truth that the highest function of life is to serve and that he serves best who serves with humility, and in the spirit of the Nazarene." Thus the simple ceremony came to a close.

Few could have remained unmoved by the appearance of these able men who had passed their three score and ten, but yet retained the physical and mental vigor of men much their junior. It was indeed a memorable occasion.

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Orientation Lectures

Understandably, there was some grumbling among applicants and members elected for a probationary year when they were notified by the Medical Society's Membership Committee that they were required to attend a series of four Orientation Lectures. Why should participation in such lectures be mandatory? Was it not an unjustified imposition to insist upon attendance at lectures in which many had little interest? What would be gained by their participation anyway?

This reaction was fully expected by the Committee. In Los Angeles where similar lectures had been presented by the medical society for its applicants, the same objections had been voiced. But just as in the western metropolis, the Committee was confident that the program would be well received and those who took part greatly benefited. It is a pleasure to report that the Committee's optimism was fully justified.

Not a single participant to your Observer's knowledge has complained that his attendance was a waste of time. On the contrary, many favorable comments have been heard which indicate that the lectures have served their purpose most adequately—that of enlightening members on matters of vital importance to the Society and themselves.

Dr. Raymond T. Holden, President of the Society, gave the first lecture on "Medical Organization" on April 3. He was not only a logical but a happy choice from many points of view. His material was well presented and excellently organized. In the course of his discussion, he dealt with factual information about the Society with which those present would not otherwise have become familiar. Touched upon were the Society's history, types of membership, its functions, program, services, and benefits, and its relationship to the American Medical Association. As might be expected, particular interest was shown in the benefits which accrue to members. Immediately following the lecture, many of those present crowded the Society's Executive Offices to obtain parking privilege cards, auto emblems, and additional information about benefits to which they were entitled.

A week later, Dr. Arthur C. Christie, Past President of the Medical Society, addressed the group on "Medical Ethics." Whatever skepticism there was before the first lecture had been dissipated. The audience was receptive and listened to his remarks attentively. Dr. Christie's scholarly approach to his subject made a deep impression.

Mr. H. Mason Welch, legal counsel of the United States Fidelity and Guaranty Company, which writes the Medical Society's master malpractice policy, gave the lecture on "Medical Malpractice Suits: Their Extent, Cause and Prevention." Mr. Welch dealt with his subject in a realistic and practical manner. There were many expressions of satisfaction with his straightforwardness in discussing the legal aspects of malpractice.

The lecture series was concluded by Dr. Herbert P. Ramsey, delegate to the American Medical Association from the District of Columbia, who spoke on "Medical Economics and Public Relations." Although he modestly disclaimed any knowledge of the subject, few are as well informed in regard to it as Dr. Ramsey. In his usual able manner, he presented a résumé of what physicians should know about the economics of medicine and public relations.

Immediately preceding this lecture, a luncheon was arranged for the purpose of providing participants an opportunity of getting acquainted with each other and members of the Membership Committee, the Board of Censors, and the Executive Board. Approximately 150 physicians were on hand.

The Committee has announced that the lectures will be published in early issues of the Medical Annals.

Congratulations are due Dr. James A. O'Keeffe, Chairman, and members of the Membership Committee for initiating such a worthwhile project. They have undoubtedly made a more important contribution to the Society's welfare than they realize.

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Why Reports? Reports as a rule are not only dry reading but hard to listen to. Nevertheless, they are indispensable to organizations for they are the only medium of communicating important information to their members.

From time to time, your Observer has heard mild protests that reports presented at business meetings of the Society are often lengthy and tiring. He would be the last to deny it. However, there is another side to this matter which members might well ponder.

The Society is governed by rules set forth in its Constitution and By-laws. These require the Chairman of the Executive Board "to inform the Society of matters considered by the Board and the disposition thereof during the period prior to each business meeting, and subsequent to the last report, so that the Society shall be kept fully informed at all times of the activities of the Executive Board," and that "wherever a matter of general policy is involved, whether originating in the Executive Board or referred to it by the Society, the question shall be submitted to the Society as a whole for action with the recommendation of the Executive Board, and the membership shall be notified of said question in the usual manner." The Board may carry on the ordinary business of the Society "with all the powers of the Society itself, subject to the Constitution and By-laws and to the action of the Society at any regular or special meeting."

It can be readily seen, then, that the Board has no alternative but to conform with the requirements prescribed for it by the Society. Brevity is, of course, highly desirable, but there is a limit to that sort of thing. If a subject can be dismissed in a paragraph or two, so much the better. Unnecessarily long reports are not only an inexcusable bore, but an imposition on listeners. Equally objectionable, however, are inadequate reports which provide members with insufficient information.

Some years ago, the Society held monthly business meetings. These became very wearisome and were not well attended. Reports were as long then as they are now when the only scheduled business session is the Annual Business Meeting. Wisely, monthly business meetings were abandoned.

In an effort to burden members as little as possible with the general affairs of the Society, not only is there only one regular business meeting a year, but annual reports are condensed as much as possible and mailed to the membership a week prior to action being taken upon them. Thus reading of long annual reports is avoided. There are, of course, so-called current reports presented at special business meetings throughout the year. These are as brief as the subject matter will permit.

The only method by which reports can be further eliminated is for the Society to amend the Constitution and By-laws in such a manner as to confer upon the Executive Board authority to carry on all the business of the Society. It is doubtful whether members would be agreeable to delegating such authority. However, there is no other alternative but for the Society membership to assume the responsibility which is now placed upon it. This demands attentive and thoughtful attention to its affairs. Reports are at worst necessary evils in a democratic body. At their best they can prove stimulating and enlightening, depending in no small degree upon the attitude of the listeners.

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"The Battle of Grand Central Palace"

Whether the physician served in the armed forces or remained at home during the recent War, the memory of those years has faded rapidly from his memory. There is a growing attitude that the War belongs to the past and had best be forgotten. But recent events will not let us forget. It appears that the Nation is again to engage in an all-out preparation for defense. Reinstatement of Selective Service is now being sought. This has evoked much discussion among civilian physicians who recall more or less vividly their draft experiences.

Those to whom Selective Service is but a dim memory will find stimulus in the graphic picture drawn by Dr. Louis Carp in the *Military Surgeon* for April, 1948. Dr. Carp's article is entitled "The Battle of Grand Central Palace" and has for its subtitle, "Observations at an Induction Station."

As all New Yorkers know, the Grand Central Palace was used in peacetime for automobile and flower shows, and for exhibitions of various kinds. However, in 1942 it was taken over by the Army, and on October 12 of that year it became an induction station, one of the largest of its kind in the United States for the Army, Navy, Coast Guard, Marine, and Air Corps. At the peak of activity, 3,750 men were "processed" in a day by approximately 170 examiners. In the course of three years, 2,138,240 men were examined, 30.4 per cent of whom were finally inducted. "The organization was such that it became a large production belt line. A man entered a civilian and emerged a soldier." Obviously the station offered the examining physicians a fine opportunity to study human beings at "a critical point in their lives."

> "The selectee's first attitude toward an organization which represented the War and Navy Departments," Dr. Carp writes, "was on the whole coöperative and showed a patriotic urge to contribute to a vast national program despite a rude break in his normal life. Except in isolated instances, there was outwardly a marked lack of fear of the future. Unmarried youths displayed intense eagerness for service. The spirit of adventure and a desire to serve their country prompted many of them to exclaim 'I want to fight!' Disqualification of some men in this latter group often produced hysterical weeping.
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> "There were others, however, whose attitude was entirely different. Some were 'essential to their communities.' Some were mute and confused. For many induction meant a violent dislocation from routine living and financial responsibility. Others were filled with anxiety because of impending separation from loved ones, disruption of plans, a new method of regimented living and the unpredictable future with fear of injury or death. These anxieties were eventually lulled in most instances and were succeeded by an attitude of resignation as if the men were saying, 'Oh, what the hell! Let's get it over with!'
>
> "There were others who were most anxious to serve in order to escape from unhappy family conditions and from financial care. They hoped to find in the new life readjustment and a solution to their problems. For them there would be renewed hope after discharge. There were many volunteers in the older age group who stated frankly that 'marriage is not what it is cracked up to be' and that they would prefer to do their 'fighting in the army.' These men, who had lost their aggressiveness, sought subconsciously to recapture on the battlefield their masculine dominance. Another group consisted of political and religious refugees whose one desire was to return to Berlin—as victors.
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> "Very often, after men reported to their Local Boards, they could not make up their minds about what to do regarding their jobs, businesses and personal and family affairs. Some thought or they had been told that they had disqualifying physical defects. They presumed that

they would not be drafted and they had made no change in their civilian status. They were amazed, irritated and jolted when they were accepted for service. There were others who thought that they were in perfect physical condition. They anticipated induction in the near future. They left their jobs or sold their businesses and wound up their personal affairs. Their families and friends frequently gave them farewell parties, presents and fond adieus. How embarrassed and sheepish they must have felt when they returned from the Station—rejected! In many instances they had to reëstablish themselves in business. Circumstances such as these started the system of pre-induction examinations. . . ."

There were, of course, many types of persons with whom the induction station had to deal. Among them were youths seventeen to eighteen who wished to volunteer but who had to obtain permission from their parents. Due to their "determination, persistence and tears," parental objection was frequently overcome. Their enthusiasm was unbounded and more often than not, they proved themselves fine material for the armed forces.

None tried the patience of examiners more than those who endeavored to evade service. "The challenge of these malingerers engendered an intense desire on the part of the induction station to beat them at their own game," says Dr. Carp. New braces or hernia trusses made examiners wary, as did those who could not see certain lines on a reading chart. Many ruses were tried, such as to "simulate a purulent discharge from one of his ears by putting mayonnaise into the auditory canal," and feigning deafness. One selectee was rejected for the latter defect, but was "immediately tailed out of the Station by an FBI agent who casually asked for a match in an almost inaudible voice. The request brought a prompt response. The selectee became a soldier almost as promptly." One psychiatrist was informed, " 'Doctor, I am a homosexual.' 'Good,' replied the skeptical physician. 'We can find the proper place for you.' The selectee turned pale when he realized that he had picked a degrading excuse in order to escape service."

Then there were the celebrities who became known to those at the induction station through "its own grapevine." Many of these were athletes. They were by far the most popular, especially baseball players and boxers. However, a number of these could not make the grade because of perforated eardrums, trick knees or other physical defects. Also in the "big name" group were name band leaders, stage, screen, and radio favorites, actors, and a sprinkling of wealthy individuals. Many of these became privates or seamen. They were joined by writers, newspapermen, reporters, politicians, and others in public life.

A large percentage of the men examined were tattooed. It was discovered that most of the inscriptions, symbols or figures were inspired by the female sex and were confined largely to the upper extremities. Dr. Carp observes that the most popular subjects were hearts pierced by arrows, figures of shapely stripped women, snakes, the American flag, ships, anchors, religious symbols, dates, names, and "simple inscriptions indicating love."

Recalled, too, were those who were disqualified for physical defects such as halitosis, smelly and perspiring feet, and severe, unsightly skin eruptions.

Then there were the neurotics, and those with more severe emotional disturbances. Many critics have "questioned an induction system which disqualified apparently healthy and strapping men who have been successful in civilian life." But Dr. Carp says that many of these had physical defects or slightly neuropsychiatric conditions which failed to meet Army standards. The answers to the following questions determined the individuals' emotional suitability for service: "How would he stand up under stress and strain? What was the degree of his nervousness, fear complexes, stability, shyness, lack of initiative, potentiality for getting along with people? How good or bad were his past social and work records and his discipline? Had he undergone previous psychiatric treatment and what was the family psychiatric background? Had he been in trouble with the law and to what extent? Why had marriage or several marriages failed?"

> "There was a large group who, though well adjusted in business or professions, nevertheless would not have been able to 'take it' in the armed forces because of fear and anxiety over family or business conditions. Some were individualists who could not conform to a system of regimentation and subordination or to unusual or painful situations. There were others in the same category who had good reasons for fearing service but failed to tell the whole story to the psychiatrist. Rejection, in their minds, would have meant criticism and gossip among friends and in the community. They went in and more often than not they became psychiatric casualties."

The greatest din in "The Battle of Grand Central Palace" emerged from the surgical and orthopedic departments. "Here examiners had to be most vociferous," Dr. Carp writes. "The men were told to strip and were then handled in groups of six. Instructions for the execution of standard exercises to test the functioning of muscles, tendons, bones, joints and feet had to be given in a clear and audible voice. The thump, thump, thump of men jumping on the balls of their feet, the trunk and squatting exercises and the rhythmic movements of the upper extremities frequently resembled rehearsals of a very amateurish college chorus. Some of the selectees took their exercises so seriously that they worked up a profuse perspiration." Not all who exerted themselves so diligently were found acceptable. Many otherwise healthy individuals could not qualify because of a bad back, bad feet or a nonacceptable joint condition. Some of this group wept when informed that they had been rejected.

Will all of this be repeated in 1948? It looks very much like it. If that be true, physicians should be consoled to some extent by the fact that previous experience will make their task less arduous than it was during the last War. Much has been learned that will contribute to the efficiency of induction stations of the future.

A Heartening Letter

Too frequently overlooked has been the splendid record of women physicians on the home front during World War II. Not a few of them were then advanced in years. Despite this fact, they carried on heavy practices, taking over in many communities vacated by their male colleagues who had joined the armed forces. Among this group in the District of Columbia are a number who deserve honorable mention. Proper recognition should be given them and, in fact, to those of all ages who served so well.

The occasion for these comments is a letter received by your Observer from one of this group. Although in her seventies, she carried on an active practice in a nearby community. Her interest and enthusiasm never flagged and at the War's end, she did an astonishing thing. Your Observer publishes her communication with some hesitancy because of personal allusions, but believes his readers will overlook this fact when they have read it.

Dr. May D. Baker, long an Active member of the Medical Society of the District of Columbia, wrote your Observer under date of March 9, 1948, as follows:

> "Bidding farewell to the Medical Society after so many years, I feel I want to leave with a friendly word. I remember your help when I left Washington in 1943 and came to live near my son, Dr. Arthur G. Baker, at Ridley Park, Pa. I have been doing some work—mostly office, and have much of interest. Because of the early date of my graduation (1896) I had never taken a State Board examination. During the War that was overlooked, but was required at its close. Just a week after I was eighty years old, I passed the examination. I was especially interested in diabetes and not ready to quit.
>
> "I drove down to Washington to attend the meeting February 26—on diabetes, but I heard so little of what was said that I was discouraged and decided to resign my membership, although I dread to do so. This is a personal letter expressing personal gratitude and also congratulating you on the very excellent way that you have accomplished your job."

It isn't often that an official of a medical society is the recipient of such a heartening letter. Physicians in their forties and fifties have frequently been heard to say that it would be impossible for them to pass a medical board examination again. They quail at the very thought of it. But to Dr. Baker, age was no barrier. She retains that priceless quality in elderly people—a perennially youthful outlook.

The Society's Executive Board, to whom this letter was read, was so impressed that it promptly voted to remit her dues permanently and instructed the Secretary to extend its congratulations.

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"Reservoir of Friends—or Critics"

To put it mildly, labor has been distinctly cool towards organized medicine. Although its largest organizations, the AF of L and CIO, have had many differences, on one point they are in complete agreement. They are strongly in favor of compulsory health insurance, despite stubborn opposition of organized medicine. Their leaders have on many occasions been violently critical of medical organizations for their stand.

In the opinion of the *Journal of the Medical Society of New Jersey*, this situation presents serious potentialities. "Fifteen million Americans belong to labor organizations," the *Journal* states. "With their families, they constitute a pool of 45,000,000 citizens—nearly all of them employed at skilled jobs, or dependents of workers so employed. They represent an enormous reservoir of friends—or critics. For most doctors these hard-working Americans, accustomed to paying their own way in life, are the backbone of practice. One would expect that an intimate rapport would exist between this huge segment of the American citizenry and the medical profession which serves them. Truth is, however, that on a formal basis, at least, there is scant contact between organized medicine and organized labor.

"It is strange that there should be so meagre a working relationship between the two groups. After all, both are steeped in the tradition of the guild—pride in craftsmanship, a desire to maintain high standards of skill, and a sense of service to the public. And the average practitioner, let it be remembered, is a working man. Except on a tiny scale, he is not an employer, and in only rare instances could he be classed as a 'capitalist.'"

Complaints lodged by labor are largely based on the fact that health care is too expensive. The *Journal* says that the average laborer wants to purchase his own medical care, and is not in favor of nationalization of medicine. The only reason that he finds it acceptable is that the costs can be taken care of in no other way.

> "This is a challenge to organized medicine—a challenge that is *not* met by branding as 'communist' or 'alien' any protest against the high cost of medical care. There are, we believe, two better answers. First, plans can be formulated for making health services available at a cost within the reach of the average skilled worker. Second, it should be possible to show the workingman that cheap, mass medicine, delivered under compulsory regulation, by physicians working under sweat-shop conditions, is not—and can never be—good medical care. Indeed, the latter contention is one which organized labor should be able to grasp without difficulty, since it so closely parallels their own battle cry."

The *Journal* believes that the answer to the first need is "voluntary health insurance," although organized labor had shown considerably more interest in the Wagner-Murray-Dingell bill and similar legislation. "This is easy to understand," the *Journal* observes. "There *are* some things to be said in favor of compulsory health insurance; those things are obvious and have been said very often and very loudly. There are also many defects—some, we believe, fatal—in such a program. The defects are more subtle, and little effort has been made to show organized labor this side of the picture."

How, then, can organized labor be won over to organized medicine's point of view? The *Journal* prescribes a "platform from which to speak to them." The "platform" is civic and other organizations through which the public can be reached and organized medicine's point of view presented effectively and where it will get a fair hearing.

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Cancer Deaths Among District Physicians

One of the features of the Interim Session of the American Medical Association held at Cleveland last January was a Cancer Detection Clinic. The Clinic's purpose was to demonstrate that physicians themselves take advantage of preventive measures which they recommend. According to Dr. Jay McLean, Director of the Bureau of Cancer Control of the District Health Department, who was an interested observer, those examined were for the most part physicians practicing in Cleveland. It occurred to him that it would be worthwhile to determine the incidence of cancer among Washington physicians if for no other reason than to stimulate further interest in the disease among the medical profession.

In a letter to your Observer, Dr. McLean said he proposed to review the obituaries which had appeared in the MEDICAL ANNALS from January 1, 1930 through November, 1947. Proceeding along this line, he learned that in this period 224 physicians had died. With the exception of 6, the cause of death was determined from the death certificates or from the obituary department of the *Journal of the American Medical Association.* Of the 224, 24 are known to have died of malignant disease; this is presuming that 2 who died following operations for brain tumors suffered from malignant growths, the diagnosis being simply tumor of the brain.

A breakdown of the cases in which cancer was the cause of death shows that in 2 women physicians, death was due to carcinoma of the ovaries and to lymphosarcoma. Of the remaining 22 deaths, 2 were due to brain tumor, 2 to leukemia, 2 to cancer of the prostatic gland, 2 to cancer of the kidneys, and 1 each to the following: cancer of the tongue, parotid gland, larynx, breast, (metastasized 14 years after the diagnosis was made), stomach, liver, pancreas, ileum, cecum, colon, rectum, abdominal sarcoma of the neurogenic type, Hodgkin's disease, and X-ray exposure.

Of the remaining 194, 92 died of some form of heart disease. Dr. McLean states that at least 34 of this group died of coronary thrombosis. Thirty-one deaths were due to cerebral hemorrhage and other forms of cerebral vascular thrombosis in the brain. Deaths of the remainder are summarized as follows: genitourinary diseases 16; respiratory diseases 15; violent or accidental death 13; rheumatism, diseases of nutrition and of the endocrine glands 9; diseases of the digestive system 9; infectious and parasitic diseases 7; chronic poisoning and intoxication 1; and diseases of the skin and cellular tissue 1.

It appears from these data that the mortality from cancer among physicians in Washington is about the average for the medical profession throughout the country, that is, approximately 10 per cent. However, one can take little comfort from this fact because the toll it takes is still tragically high. So long as this disease strikes its victims unexpectedly and so frequently, the fight to destroy this killer must go on with increased vigor.

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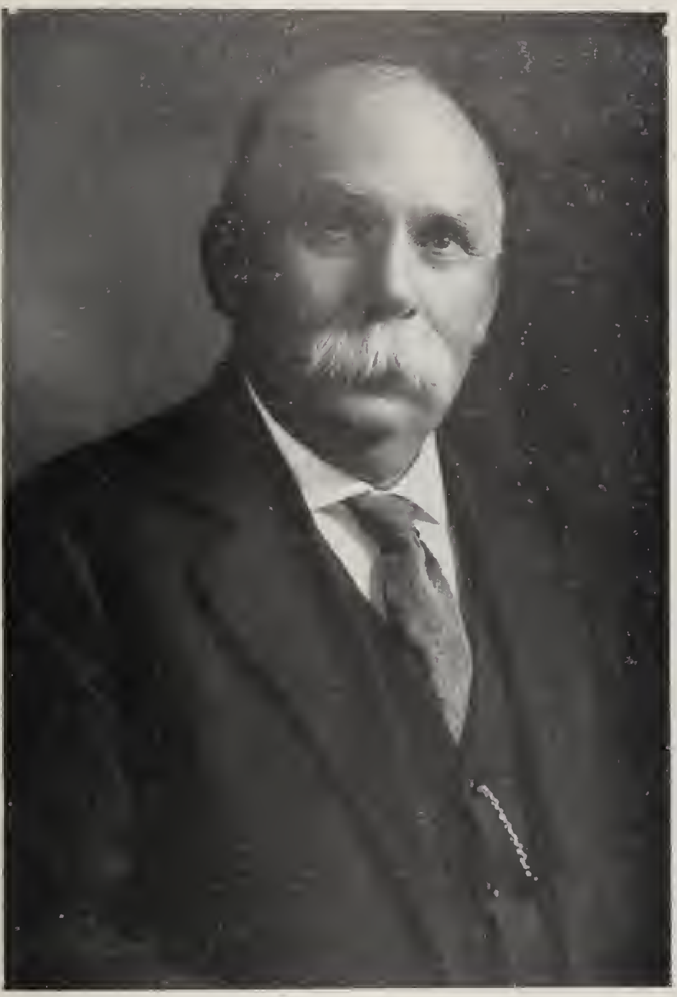
Beginning with the next issue, "In and Out of Focus" will be discontinued until fall. It will make its reappearance in the September number of the MEDICAL ANNALS.

T. W.

Washington Physicians of Yesterday



PHILIP SEDDON ROY, M.D.

A son of the Old Dominion, Dr. Philip Seddon Roy was born at Tappahannock, in Tidewater Virginia, on April 15, 1861. That was a fateful instant in American history: Fort Sumter had been bombarded and surrendered two days previously, and on that day President Lincoln issued his first call for troops. Both of Dr. Roy's parents died in his infancy, his mother only two weeks after his birth, and his father after serving in the Confederate Army.

He studied medicine at the University of Virginia, covering the then regular two-year course in one year, and graduated as M.D. in 1880, at the early age of nineteen years. This was followed (1881–82) by a postgraduate course at Jefferson Medical College.

After living for a few years in Fredericksburg, Virginia, employed in his uncle's pharmacy and as a medical practitioner, he removed in 1887 to the city of Washington, where he devoted the remainder of his life to the practice of internal medicine, with special attention to cardiac diseases. By his ability and forcefulness he attained a prominent and influential position in the community and the medical profession.

(Continued on page 310)

DEDICATION OF HAGNER MEMORIAL LIBRARY

On January 7, 1941, a year after the death of Dr. Francis R. Hagner, nationally known and widely beloved surgeon of Washington, the Clinico-Pathological Society passed a resolution that a committee be appointed to plan an adequate memorial to Dr. Hagner, who had been an active member of the Society for 30 years. Drs. Harry H. Kerr, John A. Talbot and Charles Howze were appointed members of this committee.

The District of Columbia Medical Society was invited to join the project and a committee of Drs. Luther Reichelderfer, John Thomas and Edward Y. Davidson was accordingly appointed to assist in plans for a memorial to one of its Past Presidents. The combined committees then invited the following laymen to serve with them: The Honorable Melvin C. Hazen, then President of the Board of Commissioners for the District of Columbia; Mr. Corcoran Thom, former President of the American Security and Trust Company; the Honorable John Callan O'Laughlin, Editor of the *Army and Navy Journal;* and Mr. Robert L. Lewis, General Manager of the Stewart Motor Company. This committee agreed that a memorial library at Garfield Hospital would best perpetuate the memory of Dr. Hagner. Dr. Hagner had been a very active staff member at Garfield and had developed there his nation-wide reputation in genitourinary surgery.

FRANCIS R. HAGNER, M.D.
Portrait painted by L. P. Thompson

Contributions were solicited by mail, and the names of all contributors have been recorded and will be preserved in the library. Miss Margaret Powderly, Dr. Hagner's former secretary, consented to act as Secretary and Treasurer for the Committee.

On April 15, 1948, some 50 or 60 of Dr. Hagner's colleagues and friends gathered to dedicate the Francis R. Hagner Memorial Library, located in a new room at Garfield Hospital, the site of the former solarium. Dr. Kerr gave the above history of the origin of the project and told how their efforts to carry it out had been interrupted by plans for remodeling Garfield Hospital. Before these plans were consummated, the second World War again halted all activities. The funds were invested in Government bonds to await the end of hostilities. When the War was over, at the Committee's request, Garfield Hospital employed a full-time medical librarian, Miss Laura Stewart, to take charge of the project. The Committee than proceeded to purchase a full complement of the most modern textbooks covering all the specialties. In concluding his talk, Dr. Kerr said:

"We are now at long last ready to complete our assignment. The Hagner Memorial Library comes into being this afternoon in memory of one of Washington's most outstanding surgeons."

Dr. John Cunningham, a leading genitourinary surgeon of Boston and an old friend and associate of Dr. Hagner's, unveiled a portrait of Dr. Hagner which will hang in the Library. The portrait, painted by Leslie P. Thompson, is a gift to the Library from the American Genitourinary Association. Before her death, Dr. Hagner's sister, the late Mrs. Norman James, presented the Committee with a handsome library clock.

The Library was formally presented to Garfield Memorial Hospital by the Chairman of the Committee, Dr. Kerr, and was accepted by Mr. George Dunlop, Vice President of the Board of Directors of the Hospital.

Immediately preceding the unveiling, Dr. Edward Y. Davidson, the only appointee of the Medical

Society to the Committee who survived to see the completion of the project, paid eloquent tribute to his former friend and colleague:

"Dr. Francis R. Hagner was a human magnet that drew souls to him and held them closely to his heart. He had the God-given capacity for drawing men to him. One could not resist the attractive force of his personality. In his presence one felt that he was standing before the high altar of friendship.

"He wove into the tapestry of his life colors predominantly bright because during the struggle for self-mastery he found the sine qua non of a well-ordered life to be faith and sympathetic understanding.

"He kept burning in his heart youth's eternal flame that it might render incandescent a resolve to forget self in service to others.

"Suffused with a radiance that is the hallmark of the cultured gentleman, he made barren places fruitful with kindness.

"He found life as replete with blessings as it is full of interest and opportunities—the miracle of the dawn, the gold of the sun, the silver of the moon, the songs of birds, the vantage points of heights, the serenity of valleys, the quiet of the woods, the sough of the winds, the music of babbling brooks, the laughter of great waters, the fragrance and beauty of flowers, the habits of wild things. He found life as beautiful as its opportunities are beneficent. He loved nature, and her manifestations were his handmaids.

"He found life abundant from contact with his fellow man. His heart never withered or hardened. It never lost its hold of the magnetic chain of humanity. It partook of the universal throb.

"I ask you, then, is it any wonder that life reserved for him its richest reward—the flame and the spirit and the glory of living.

" 'So hearts leaped up to breath the finer atmosphere,
And eyes smiled truer for the radiance clear,
And souls grew loftier where his teachings fell,
And all gave love.' "

PRESENT POLICY OF TRUDEAU SOCIETY ON BCG VACCINATION

While BCG vaccine, properly prepared and administered, may be considered harmless to tuberculin-negative persons, the degree of protection reported following vaccination is by no means complete nor is the duration of induced relative immunity permanent or predictable, according to a report submitted to and approved by the Executive Committee of the American Trudeau Society, which met in Chicago, January 22. ATS is the Medical Section of the National Tuberculosis Association.

In the light of present knowledge, the report continues, vaccination of the following more vulnerable groups of individuals is recommended provided they do not react to adequate tuberculin tests: doctors, medical students and nurses; hospital and laboratory personnel; individuals who are unavoidably exposed to infectious tuberculosis in the home; patients and employees of mental hospitals, prisons and other custodial institutions in whom the incidence of tuberculosis is known to be high; and children and certain adults considered to have inferior resistance and living in communities in which the tuberculosis mortality rate is unusually high.

Vaccination of the general population is not recommended at this time except for carefully controlled investigative programs, which can best be carried out under the auspices of official agencies such as the U. S. Public Health Service, state and municipal health departments, and other especially qualified groups. BCG vaccine should not be made available for general distribution in the United States because the most effective strain has not been agreed upon, the most effective method of vaccination has not been decided, and arrangements for transportation and storage have not been perfected.

In view of this report, the Society believes the most effective methods of controlling tuberculosis in the general population are, as before, to improve living conditions and the general health; reduce tuberculous infection by unremitting search among presumably healthy individuals for patients with infectious tuberculosis; prompt and adequate medical and surgical treatment of patients with active disease; segregation and custodial care of those not amenable to accepted forms of therapy; and adequate rehabilitation.

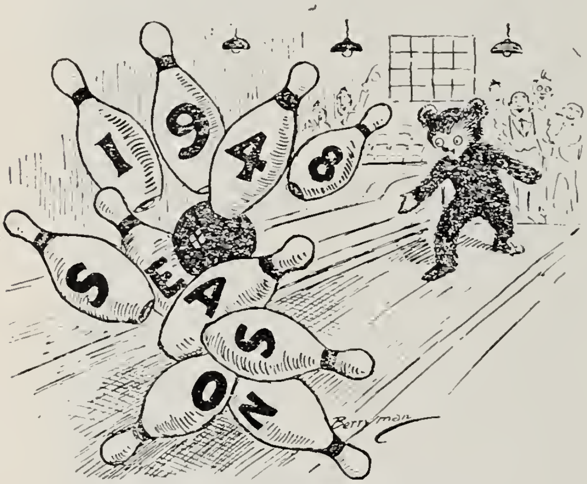
Quoting from the report: "It is to be emphasized

(*Continued on page 310*)

MEDICAL BOWLERS CONCLUDE 1947–48 SEASON

Concluding another successful season, the D. C. Medical Duckpin League held its Seventh Annual Banquet, April 15, at the Brook Farm Tea House in Chevy Chase. Among the guests were Dr. Raymond T. Holden, President, and Mr. Theodore Wiprud, Secretary, of the Medical Society of the District of Columbia, and Dr. M. M. Alexander, President of the District Dental Society.

Feature of the evening was a humorous report by Mr. Harold S. Fitz of the Chesapeake and Potomac Telephone Company, purported Treasurer of the so-called D. C. Improvement Association. Distribution of awards followed his talk.



Seventh Annual Dinner
D.C. Medical Duckpin League

Team prize awards went to the following:

First Place, Mt. Alto: Dr. Alfred Dibbs, Captain; Dr. Ambrose Cook, Messrs. Walter Mathieson, Kenneth Clark and Paul Duffy.

Second Place, George Washington: Dr. John W. Price, Captain; Drs. Maurice Van Kinsbergen, Dee Rich Parkinson, Clark P. Halstead and Messrs. Joseph Yantosh and Frank Baiers.

Third Place, Suburbanites: Dr. M. F. Ottman, Captain; Drs. G. Roland Gable, William E. Lewis, J. B. Farris, Cyrus R. Creveling, Milton F. Weingarten.

Fourth Place, Garfield No. 2: Dr. Frank S. Bacon, Captain; Drs. Thomas J. Pekin, John W. Nesbitt, Israel Kessler, George A. Resta and John A. Kennedy.

Fifth Place, Sibley No. 2: Dr. George H. McLain, Captain; Drs. Raymond C. Kirchner, Willis B. Morse, J. Phelps Hand, Jr., Sollie Katzman and Mr. Howard Bers.

The following members were among those who received individual prize awards:

High League Average: Drs. Joseph W. Briles and Frank Richardson.

High Individual Set: Drs. Hand, Charles Hageage and Gable.

High Individual Game: Drs. Lewis, John F. Finnegan and Ralph J. Kitchell.

High Strikes: Drs. Ottman and Kessler.

High Spares: Drs. Cook, R. Lee Simpson and Dibbs.

High Team Averages: Drs. Ottman, Kessler, Hand, Richardson, Alfred Wilson, Clayton H. Hixson, Briles, Allen S. Lloyd, Simpson, William G. Cushard and Roy G. Klepser.

Following the League season, a sweepstakes held at Brookland Bowling Alleys, site of the regular League games, found Dr. Weingarten carrying off top honors with Drs. Hand, Resta and Howard E. Newman among the winners. At the sweepstakes following the banquet Mr. Baiers ran away from the field with Drs. Kessler, Walter W. Boyd and Dibbs coming in for a share.

Bowling among the doctors has become so popular that very few vacancies will exist in the teams lined up for the 1948–49 series. It is expected, however, to form a list of eligible League substitutes. Anyone wishing to be included in such a list may contact President Ottman, Vice President McLain or Dr. Resta.

MEMBERSHIP

The following applicants for membership were duly elected to membership at the meeting of the Executive Board, April 26, 1948, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

Active Members

Halla Brown, 387 37th Place, S.E.
Edna G. Dyar, 1726 Eye Street N.W.
Thomas A. Gonder, Garfield Hospital
Charles G. Hoyt, 2650 Wisconsin Avenue, N.W.
Vincent M. Iovine, 2500 Que Street, N.W.
Christopher J. Murphy, Jr., 3631 Gunston Road, Alexandria, Va.
Lucy D. Ozarin, 5863 Chevy Chase Parkway, N.W.
Charles F. Stiegler, 1517 30th Street, N.W.

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News and Personals

The American Medical Association will convene for its 97th annual session in Chicago, June 21 to June 25. Drs. Coursen B. Conklin and Herbert P. Ramsey, Delegates to the AMA, and Theodore Wiprud, Secretary of the Society, will represent the District Medical Society officially at the meetings.

The Society for Vascular Surgery, convening for its second annual meeting at the Stevens Hotel in Chicago, June 20, will hold an all-day session, beginning at 10 a.m. Dr. J. Ross Veal of Washington will be one of the principal speakers.

The American Society for the Study of Sterility is holding its fourth annual meeting in Chicago, June 21 and 22, at the Congress Hotel. A program may be obtained from Dr. John O. Haman, 490 Post Street, San Francisco 2, Calif.

The Middle Eastern District of the College of American Pathologists, the Washington Society of Pathologists, and the Section on Pathology and Laboratory Medicine of the District Medical Society are holding a joint meeting in Washington, May 24 and 25. Headquarters will be in the Medical Society's building, 1718 M Street, N. W., with hotel headquarters at the Mayflower Hotel.

Dr. Oscar B. Hunter, Chairman of the Section and a member of the Board of Governors of the College of American Pathologists, will greet visitors at the opening session, May 24, at 9:30 a.m. Dr. Hunter will also preside the same evening at a banquet at the Mayflower Hotel.

Presiding at the afternoon session, May 25, will be Dr. O. Benwood Hunter, Jr., who is President of the Washington Society of Pathologists. Dr. Roger M. Choisser, Chairman of the Program Committee for the joint meeting, will preside at the closing session. At this meeting Dr. Raymond T. Holden, President of the District Medical Society, will extend a word of greeting.

Papers to be presented by members of the District Medical Society will be: "Granulomatous Reactions in Regional Enteritis," Dr. Henry Rappaport, jointly with Dr. Fred H. Burgoyne of the National Cancer Institute and Dr. Hans F. Smetana, of the Army Institute of Pathology; "The Report of Ten Year Follow-up on Giant Cell Tumors of the Bone," Dr. Charles F. Geschickter; "Recent Improvements in Blood Chemistry Technic," Dr. H. H. Leffler; "Complications of Leptomeningitis," Dr. Samuel P. Hicks; "Tumors of Glomus Jugularis," Dr. Theodore Winship. Drs. Lloyd G. Lewis and Donald Stubbs are listed among the discussants.

Included in the intensive two-day program are speakers from the U. S. Naval Medical School, the U. S. Naval Medical Research Institute, the National Cancer Institute, the Army Institute of Pathology, Veterans Administration Hospital, Walter Reed General Hospital, the Army Medical Department Research and Graduate School, Georgetown and George Washington Universities, and other local hospitals. Dr. Robert A. Moore, Professor of Pathology of Washington University, St. Louis, and Dr. Frank W. Hartman, Pathologist and Director of Laboratories of Henry Ford Hospital, Detroit, will be among the speakers. Dr. Hartman is President of the College of American Pathologists.

Meetings will be held in the Medical Society's auditorium, at the U. S. Naval Hospital, Bethesda, Md., and at Walter Reed General Hospital.

The Medical and Surgical Relief Committee, Inc., which was founded during the War to collect drugs and medical equipment for use by physicians and medical institutions in devastated countries, has recently established a continuing drive in Washington for the collection of drugs, equipment, and current publications. These materials will be collected at specified intervals by representatives of the local committee, who in turn will forward them to the New York warehouse of the organization, where they are inspected, reconditioned, packaged, and forwarded to recognized agencies operating free clinics in various parts of the world.

Members of the Washington Medical Advisory

Calendar of Meetings

April 1	Section on Neurology and Psychiatry
April 2	Grievance Committee
April 3	Orientation Lecture I
	Washington School of Psychiatry
April 5	Graduate Nurses' Association
April 7	Committee on Compensation Insurance
April 9	Committee on Industrial Medicine
April 10	Orientation Lecture II
	Section on Pathology and Laboratory Medicine
April 13	Committee on Compensation Insurance
	District Dental Society
	Registered X-ray Technicians of Washington
April 14	Scientific Meeting of Society
	Woman's Auxiliary
April 17	Orientation Lecture III
April 19	Subcommittee on Public Health Exhibits, 19th Annual Scientific Assembly
	Association of Undergraduate and Practical Nurses
April 20	Committee on Compensation Insurance
	D. C. Medical Technicians
	Committee on Coöperation with Fourth International Congresses on Tropical Medicine and Malaria
April 22	Joint meeting of Section on Neurology and Psychiatry and Washington Psychoanalytical Society
April 23	House Committee
	Subcommittee on Special Exhibit, A.S.A.
	Washington Heart Association
April 24	Orientation Lecture IV
April 26	Executive Board
	Board of Censors
	Medical Bureau Committee
	Committee on Medical Care in Public Institutions
	Subcommittee on Child Welfare
	Selective Service Association
April 27	Section on General Practice
April 28	Scientific Meeting of Society
	Subcommittee on Social Events, A.S.A.
	Board of Trustees, Medical Service
April 29	Section on Radiology
	Subcommittee on Venereal Diseases
April 30	D. C. Rheumatism Society

Committee are Drs. Worth B. Daniels, Walter W. Boyd and Crenshaw D. Briggs. They urge physicians throughout the District to set aside in their offices any used equipment, instruments, physicians' and pharmaceutical samples, technical books and periodicals which they can give to this cause. When ready for collection, please notify Mrs. W. Stuart Symington, Chairman, Apartment 406-D, the Shoreham Hotel, telephone Adams 0700, or leave a message at Metropolitan 1700. Cash contributions are also needed to meet shipping expenses. Checks should be made payable to the Medical and Surgical Relief Committee, Inc. and sent to Mrs. Symington or Dr. Daniels.

Plans for the **19th Annual Scientific Assembly** of the Medical Society are getting under way rapidly. For the second time Dr. Robert H. Groh will serve as General Chairman and Dr. Robert J. Coffey as Vice General Chairman of the Committee on Arrangements.

President Holden has practically completed the appointment of personnel to the various committees. At the February meeting of the Executive Board, the following members were confirmed as chairmen of the various subcommittes for the ASSEMBLY:

PROGRAM—Edward J. Stieglitz
SCIENTIFIC EXHIBITS— J. Ross Veal
PUBLIC HEALTH EXHIBITS—William J. Tobin
SPECIAL EXHIBIT—Zigmond M. Lebensohn
RADIO, TELEVISION AND MOVIES—George M. Wyatt
PUBLIC MEETING—Thomas Bradley
ATTENDANCE—Walter H. Gerwig
PUBLICITY—Luther W. Gray
SOCIAL AFFAIRS—R. Lomax Wells
FINANCE—J. Blaine Harrell
WOMEN'S—Gladys Kain

The Section on Gastroenterology held its April meeting on the 12th at the home of Dr. Lee Brison Norris. Dr. Aubrey O. Hampton addressed the members on "Diagnosis of Hiatus Hernia and Differential Diagnosis of Gastric Ulcer versus Gastric Carcinoma."

The following officers were elected for 1948–49:

Dr. L. Brison Norris, *Chairman;* Dr. John E. Morris, *Vice Chairman;* Dr. Alan F. Kreglow, *Secretary-Treasurer.*

The February meeting of the Section was presented before the District Medical Society, February 11. Dr. Sara Jordan, Director of the Department of Gastroenterology of the Lahey Clinic, Boston, spoke on "Evaluation of the Peptic Ulcer."

About 120 radiologists, surgeons and pathologists attended the meetings of the **American Association for the Study of Neoplastic Diseases** in Washington, April 15, 16 and 17, at the Kellogg Building of Garfield Memorial Hospital.

Many members of the District Medical Society took an active part in the program. Chairmen for various sessions were Drs. Roger M. Choisser, E. Clarence Rice, Calvin T. Klopp, Aubrey O. Hampton and Ralph M. Caulk.

In a session devoted to the "Operation of a Tumor Clinic," Dr. Klopp presided and gave an introduction to the subject. Drs. Ernest Gould, Noel Stow and Thomas Bradley discussed various aspects of the subject.

In a Symposium on Lesions of the Breast, Drs. Jay McLean, H. H. Kerr and M. M. Copeland were among the speakers.

Drs. Lloyd G. Lewis and William P. Herbst participated in a Symposium on Endocrines and Neoplasia.

Dr. George W. Ramsey of Washington, Pa., was elected President at the closing session. Local physicians reëlected to office were Dr. E. R. Whitmore, Secretary, and Dr. J. W. Lindsay, Treasurer.

The Smith-Reed-Russell Society of George Washington University School of Medicine, an honor society for juniors and seniors in the Medical School, held its 17th annual banquet at the Mayflower Hotel, March 22. Elected to honorary membership were three outstanding scientists: Dr. Monroe J. Romansky, Associate Clinical Professor of Medicine, and Dr. Thomas M. Brown, Professor of Medicine, both faculty members at George Washington, and Dr. Leonard A. Scheele, newly appointed Surgeon General of the U. S. Public Health Service. Dr. Scheele was also the principal speaker at the banquet.

At the meeting of the **Executive Board,** March 29, **Dr. Leslie H. French** was added to the membership of the Committee on Medical Care in Public Institutions.

At the annual meeting of **Health Security Administration,** January 27, 1948, **Dr. John A. Reed** was elected President, succeeding **Dr. Henry C. Macatee,** who recently resigned from that office after an incumbency of twelve years. Dr. Reed became a member of the Board of Trustees of HSA in 1946.

Dr. Reed is a graduate of George Washington University, receiving his M.D. degree from the School of Medicine in 1922 and his Bachelor of Arts degree in 1928. He took postgraduate training in diabetes at Deaconess Hospital, Boston, in 1924 and is responsible for a widespread interest in diabetes among both physicians and laymen in Washington. He was largely responsible for organizing the Washington Diabetes Association, Inc., in 1946 and was elected its first President, which office he still holds. He assisted in organizing the Clinical and Lay Societies, both subsidiary organizations of the Diabetes Association.

JOHN A. REED, M.D.
President of Health Security Administration

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From 1929 to 1940 Dr. Reed was Secretary of the Board of Police and Fire Surgeons, following which he was appointed Acting Chairman of the Board, 1940–45, and Chairman since 1945. He has been Assistant Clinical Professor of Medicine of George Washington University since 1944, and is attending physician at George Washington University Hospital. He is a diplomate of the American Board of Internal Medicine.

Dr. Reed is a member of many scientific organizations and has taken a leading role in many of their activities. He is a Fellow of the American College of Physicians, American Medical Association, and the Washington Academy of Medicine; Past President of both the George Washington University and Galen-Hippocrates Medical Societies; Active member of the District Medical Society since 1924 and General Chairman of the Committee on Arrangements for the 1940 Annual Scientific Assembly; member of the American Association for the Advancement of Science, American Diabetes Association, and the Cosmos Club; and an Associate member of the American Gastroenterological Society.

The Clinico-Pathological Society held its annual dinner at the Chevy Chase Club, April 20. Dr. John Hugh Lyons, President of the Society, presided and introduced the guest speaker, Jonathan Daniels, Editor of the *Raleigh* (N. C.) *News and Observer*. Mr. Daniels, who was technical adviser during the War to President Roosevelt and later press secretary, gave an address on "Look South, Physicians." Mr. Daniels is a brother of Dr. Worth B. Daniels of Washington.

The 1948 Kober Lecture was delivered on March 30 in Gaston Hall at Georgetown University by Colonel Edgar Erskine Hume, U.S.A., President of the Association of Military Surgeons of the United States. His address was entitled "War and Medicine."

Colonel Hume has been an officer of the Army Medical Corps since before the First World War. In 1919–20, as United States Commissioner, he directed the successful campaign against typhus in Serbia and other Balkan countries. For four years he was Assistant Librarian and for another four years Librarian of the Army Medical Library in Washington, largest medical library in the world. During the recent War he served in North Africa and Sicily; thereafter, 1943–45, as a Brigadier General, he was Chief of Allied Military Government, Fifth Army, Italy, and was responsible for the government of three fourths of the peninsula. During this period his experience with typhus proved invaluable during the epidemic of that disease in Naples, 1943–44. From 1945 to 1947, Colonel Hume was Chief of Military Government in the U. S. Zone of Austria. He is now Chief of the Reorientation Branch (Civil Affairs), Department of the Army.

Colonel Hume graduated in medicine from Johns Hopkins University in 1913 and received the degree of Doctor of Public Health in 1924 from the same University.

The Washington Heart Association held its annual meeting in the auditorium of the Medical Society of the District of Columbia, April 23. Dr. Arthur C. DeGraff, Samuel A. Brown Professor of Therapeutics of New York University, was the principal speaker; his subject, "Clinical Comparison of the Cardiac Glycosides."

The Medical Society of St. Elizabeths Hospital held a meeting and election of officers, April 19. Dr. Daniel Blain, Medical Director of the American Psychiatric Association, spoke on "Present Trends in Psychiatry."

New officers elected were:

Dr. Theodore C. C. Fong, *President;* Dr. Morris Kleinerman, *Vice President;* Dr. Leon Yochelson, *Secretary-Treasurer;* Drs. Edgar D. Griffin and Harold Stevens, members of the Executive Committee.

The Warwick Memorial Clinic was awarded a grant of $50,000 by the American Cancer Society, according to an announcement made March 4, to be used for cancer research. This amount was augmented by an additional contribution of $10,000 by the District Chapter of the Society. Dr. Warren Andrew, Associate Professor of Anatomy, and Dr. Monroe J. Romansky, Associate Clinical Professor of Medicine, both of George Washington University School of Medicine, will direct the research made possible by these funds.

A cancer detection clinic was opened at **Gallinger Municipal Hospital,** March 8, under the direction of Dr. Jay McLean, Director of the Bureau of Cancer Control of the District Health Department.

The new cancer detection clinic at Doctors Hospital, which opened March 30, is located on the first floor of the new building at 915 19th Street, N. W. The clinic will conduct three examination periods each week, from 9 a.m. to noon and from 1:30 to 4:30 p.m. on Mondays, and from 1:30 to 4:30 p.m. on Thursdays.

Dr. Charles S. White, President of the Hospital's Board of Directors, announced that the clinic will be supervised by a Cancer Detection Committee, which will include Dr. Harry Lee Claud, Chairman, and Drs. Arthur C. Christie and O. Benwood Hunter, Jr. Findings will be reported to the family physician of the persons within about a week. Cases that have no regular physician will be referred to MEDICAL BUREAU, which is operated by the District Medical Society. Examinations will be conducted by Dr. John O. Robben, Medical Director, and two private physicians from a group who will contribute their services. The examinations will require about 20 minutes per person.

The clinic is not intended for persons who suspect they have cancer but as a precautionary check for others. The charge for the examination is $10, a fee recommended by the American Cancer Society and made possible by the coöperating physicians who are contributing their services. Appointments may be made by calling Doctors Hospital and asking for the cancer detection clinic. Arrangements can be made for free examinations for persons unable to pay.

According to Dr. White, the clinic will be conducted in accordance with the requirements of the American Cancer Society, the American College of Surgeons, and in coöperation with the Cancer Control Committee of the District Medical Society.

The American Hearing Society is established in new headquarters on the fifth floor at 817 14th Street, N. W. The telephone number is National 2550.

A portrait of **Miss Mattie Gibson, Superintendent Emeritus of Children's Hospital,** was presented to the Hospital, April 8, by the Nurses' Alumnae Association. Mrs. James Riley, President of the Association, made the presentation. The portrait was painted by Catharine Carter Critcher of Charles Town, West Va.

Dr. John R. Heller was appointed Director of the **National Cancer Institute,** April 14, succeeding Dr. Leonard A. Scheele, who is now Surgeon General of U. S. Public Health Service. Dr. Theodore J. Bauer, of Iowa City, Iowa, will fill the position vacated by Dr. Heller.

Dr. Heller is a graduate of the Emory University School of Medicine, Atlanta, Ga. In 1930 he entered public health work as a clinician for the Georgia State Board of Health on a syphilis control project conducted jointly with Public Health Service. He was appointed Chief of the Division of Venereal Diseases, USPHS, on July 1, 1943, where he has since directed the wartime and postwar Federal program of venereal disease control. Last fall he made a survey for American military authorities on civilian venereal disease control in the United States Zone of Germany. He will assume his new duties about May 15.

Dr. Bauer, presently on detail with the Chicago Board of Health, where he serves as city venereal disease control officer and as medical officer of the Chicago Intensive Treatment Center, has worked principally in the field of venereal disease control. He has been with USPHS since 1930.

Dr. Herbert P. Ramsey was appointed by the Board of Trustees of the American Medical Association to serve on a liaison committee with the American Red Cross in a study of the national blood bank program. The liaison committee met with various scientific committees of the Red Cross at AMA Headquarters in Chicago on April 2 and 3. Other members of the committee are Dr. A. S. Giordane, South Bend, Ind., Chairman; Drs. Leonard W. Larson, Bismarck, N. D., John W. Green, Vallejo, Calif., and Ralph T. B. Todd, Tarrytown, N. Y.

President Raymond T. Holden was a dinner guest of the Medical Club of Philadelphia April 16, in celebration of the 100th anniversary of the Medical Society of the State of Pennsylvania. The speaker of the evening was the President of the American Medical Association, Dr. Edward L. Bortz, of Philadelphia. Invitations to attend the banquet were issued to presidents of the medical societies who constitute the Middle Atlantic States Regional Conference.

Dr. Wallace M. Yater, Director of the Yater Clinic, was presented the Award of Honor for Scientific Achievement at a special dinner meeting of the Georgetown Clinical Society, March 20, at the Mayflower Hotel.

Presentation of the honor plaque was made by Dr. Thomas F. Keliher, President of the Society. The guest speaker, Dr. Frank Mann, Director of Experimental Medicine of the Mayo Clinic, Rochester, recounted Dr. Yater's varied contributions to medicine, beginning in 1926, when he was a Fellow in Medicine at the Mayo Clinic, up to the present.

Dr. Yater, who was formerly Professor of Medicine and Head of the Department of Medicine at Georgetown University School of Medicine, resigned in 1946 to set up and direct the Yater Clinic at 1801 K Street, N. W. He was selected by the Clinical Society as the fourth recipient of the award in recognition of his distinguished services in the field of general medicine.

Dr. Thomas Parran, who has been appointed to the staff of the United Nations International Children's Emergency Fund as head of a temporary mission to the Far East, left by plane to begin his new assignment, April 19. The purpose of the mission is to survey the needs of mothers and children in the Philippines, China, French Indo-China, Malaya, Singapore, Indonesia, Thailand, Burma, Ceylon, India and Pakistan.

Dr. Edward B. Tuohy and Dr. Joseph S. Lawrence were guest speakers at the 156th Annual Meeting of the Connecticut State Medical Society, which was held in Fairfield, Conn., April 27–29. Dr. Tuohy presented two papers, "Integration of Anesthesiology in Medicine" and "A New Method of Parenteral Medication and Anesthesia with the Hypospray." The latter was read before the Section on Anesthesia.

Dr. Lawrence, Director of the Washington office of the AMA, discussed national legislative affairs at a meeting of the Women's Auxiliary, whose annual meeting was held in conjunction with the State Society.

Dr. R. Lomax Wells participated in the Conference on Medical Administrative Problems in Commerce and Industry at Columbia University, New York, May 5. Dr. Wells, who is Medical Director of the Chesapeake and Potomac Telephone Company, spoke on "The Effects of Industrial Medical Services on Absenteeism."

Dr. Wells also participated in the Fifth Postgraduate Course in Industrial Medicine of the Long Island College of Medicine, April 12, when he read a paper on "Occupational Versus Non-occupational Cause of Absenteeism. What Are the Facts?"

Drs. William P. Herbst and Clifford E. Bagley took part in the program of the Mid-Atlantic Section of the American Urological Association at Hot Springs, Va., March 12 and 13. Dr. Herbst spoke on "Observations on the Effect of Methyoxy Bisdehydro Doisynolic Acid as an Estrogen," while Dr. Bagley discussed "Urinary Extravasation: A Report on the Clinical Management of 92 Consecutive Cases Admitted to the Urological Department of Gallinger Municipal Hospital."

Dr. H. H. Kerr, President of the D. C. Division of the American Cancer Society, was one of the speakers at the launching of the American Cancer Society's 1948 fund campaign in Constitution Hall, March 31. About 1,000 persons attended the program, in which nationally known medical scientists, Government officials, and radio, stage and screen stars participated.

The national goal was $16,042,000, to be used for research, cancer education and medical services. Of this amount, the District's share was $175,000. Dr. Morris Fishbein, Editor of the *Journal of the AMA*, was among the national medical leaders present at the launching of the District campaign. The drive extended through April.

Dr. Winfred Overholser was guest speaker at a luncheon meeting of the Advertising Club of Washington at the Hotel Statler, April 6.

Dr. A. Clagett Gray represented the Medical Society at a meeting of the Council on National Emergency Medical Service of the American Medical Association, which was held in Chicago, April 5 and 6.

Theodore Wiprud gave two lectures before the senior medical students of Howard University, April 20 and 27. The first lecture was entitled

"Physician's Financial Records" and the other, "Prepaid Medical Care."

Brigadier General Wallace Graham, M.C., U.S.A., addressed a regional meeting of the American Cancer Society's Virginia Division, April 5, at the George Mason Hotel in Alexandria.

Dr. Lawrence E. Putnam informs the Society's office that he has resigned as Acting Medical Director of the Food and Drug Administration in order to devote his time to the practice of internal medicine.

Washington physicians who attended the 29th Annual Session of the **American College of Physicians** in San Francisco, April 19–23, were Drs. A. J. B. Connolly, Leslie H. French, Maurice H. Friedman, Leon S. Gordon, Oscar B. Hunter, Thomas Keliher, John Minor, Lester Neuman, Russell C. Payne, J. Winthrop Peabody and Wallace M. Yater.

Dr. Benjamin Karpman addressed graduates of St. Elizabeths Hospital School of Nursing, April 5. **Dr. Winfred Overholser,** Superintendent, presented diplomas to the 16 graduates.

Drs. Brian Blades and Monroe J. Romansky were among the consultants who participated in the Fifth Streptomycin Conference in Chicago, April 15–18, sponsored by the Veterans Administration.

Dr. Henry A. Monat served as delegate to the Fourth International Congresses on Tropical Medicine and Malaria for the National Gastroenterological Association.

Dr. A. Barklie Coulter, in a talk before the Graduate Nurses' Association, April 5, in the Medical Society's auditorium, recommended chest X-rays for all patients admitted to hospitals for any cause.

The social work advisory committee of the District Chest X-ray Survey sponsored a day-long institute for workers on trends of tuberculosis treatment. **Dr. George D. Weickhardt** discussed the psychiatric problems of the disease. The institute was held, April 2, in the Archives Building.

Dr. Roy A. Wolford has been appointed Assistant Medical Director for Professional Service in the Veterans Administration Department of Medicine and Surgery, succeeding Dr. Paul B. Magnuson, who became Chief Medical Director, January 16, 1948.

A native of Piedmont, West Va., Dr. Wolford graduated from the University of Maryland Medical School in 1917.

Mr. John Anderson, Assistant Administrator of Children's Hospital for the past nine years, has been appointed Administrator of **Arlington Hospital,** replacing Karl H. York, who resigned May 1. Mr. Anderson came to Washington in 1938 to become Chief Engineer at Children's. After a year he was appointed Assistant Administrator. He is a member of the American Hospital Association and the Maryland-Virginia Hospital Association, and is a nominee for membership in the American College of Hospital Administrators.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have been received for review:

The Battle of the Conscience: A Psychiatric Study of the Inner Working of the Conscience. Edmund Bergler, M.D. Price, $3.75. Pp. 296. Washington, D. C.: Washington Institute of Medicine, 1948.

The Acute Bacterial Diseases—Their Diagnosis and Treatment. Harry F. Dowling, M.D., F.A.C.P., Clinical Professor of Medicine, George Washington University; Chief, George Washington Medical Division, Gallinger Municipal Hospital; with the collaboration of Lewis K. Sweet, M.D., Chief Medical Officer in Pediatrics and Infectious Diseases, Gallinger Municipal Hospital; Adjunct Clinical Professor of Pediatrics, George Washington and Georgetown Universities; and Harold L. Hirsh, M.D., Assistant Professor of Medicine, Georgetown University; Director of the Bacteriology and Immunology Laboratory, Georgetown University Hospital. Price, $6.50. Pp. 465, with 55 figures. Philadelphia: Saunders, 1948.

Textbook of Gynecology, 3rd ed. Emil Novak, M.D., F.A.C.S., Assistant Professor of Gynecology, The Johns Hopkins Medical School; Gynecologist, Bon Secours and St. Agnes Hospitals, Baltimore. Price, $8.00. Pp. 742, with 484 illustrations. Baltimore: Williams & Wilkins, 1948.

EDWARD ARTHUR BALLOCH, A.B., M.D., M.A., D.Sc.
(1857–1948)

Dr. Edward A. Balloch, who at the time of his death was the oldest living member of the Medical Society of the District of Columbia, died March 2, 1948, after a long illness, at the age of 91 years. He was Past President of the Medical Society, a Life member of the Society since 1930, and Dean Emeritus of Howard University School of Medicine.

EDWARD ARTHUR BALLOCH, M.D

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Dr. Balloch was born in Somersworth, New Hampshire, January 1, 1857, the son of George W. and Martha Palmer Balloch. He graduated from Princeton University in 1877 and from Howard University School of Medicine in 1879. He was on the teaching staff of Howard University as instructor, Professor of Surgery, and Dean for more than fifty years. In 1929 he received from Howard University the degree of Doctor of Science and a testimonial bronze tablet. On the day of his death, the University's Annual Alumni Award for distinguished postgraduate achievement was conferred upon him in absentia. He also held an honorary Master of Arts degree from Princeton.

For many years Dr. Balloch served on the District Board of Medical Examiners. During World War I he was active as medical consultant on local draft boards.

Dr. Balloch became affiliated with the Medical Association of the District of Columbia in 1889, and with the District Medical Society in 1890. In 1909 he assumed its highest office, the Presidency. He was also Past President of the Washington Surgical Society, the Microscopical Society, and the Gynecological and Obstetrical Society. He was a Fellow and founding member of the American College of Surgeons, and was a member of the Southern Surgical Society.

He was also a member of many other organizations: the Cosmos Club, since 1902, Past President and oldest living member of the Princeton Club of Washington, and Sons of the American Revolution. He was formerly a member of the Washington Golf and Country Club and the old Washington Bicycle Club.

In addition to his other activities he found time for writing. He wrote various pamphlets on surgical subjects and contributed numerous articles to medical and surgical publications.

His wife, Mrs. Lillian McGrew Balloch, whom he married in 1886, preceded him in death in 1935. He leaves a daughter, Mrs. Agnes Balloch Dawson, wife of Ambassador William Dawson, United States representative on the Governing Board of the Pan American Union, with whom he made his home at 2022 Columbia Road, N. W.

RUPERT BLUE, M.D., D.Sc., D.P.H., F.A.C.S.
(1868–1948)

Dr. Rupert Blue, Surgeon General of the United States Public Health Service from 1912 to 1920, and a Past President of the American Medical Association, died April 12, 1948, at Roper General Hospital, Charleston, S. C. In 1916 the Medical Society of the District of Columbia conferred Honorary membership upon Dr. Blue.

Dr. Blue's entire professional career was in the Public Health Service, which he entered as Assistant Surgeon in 1893, the year following his graduation from the University of Maryland School of Medicine. He immediately began the fight for improved American health which was to extend throughout his life. In 1903 and 1904 he attacked the bubonic plague in San Francisco and revolutionized the method of fighting this scourge. He was credited with determining that the plague was carried by fleas on rats rather than by human carriers. The extensive rat extermination drives which he conducted in California were credited with halting outbreaks of the plague. As late as 1920 French officials invited him to Paris to describe the results of his rat extermination drive in California.

He went to England for special study in 1910 and was graduated from the London School of Tropical Medicine.

On assuming the office of Surgeon General in 1912, he started an intensive investigation into the causes of malaria and typhoid fever. The result of his study was sanitary regulations for the control of drinking water on trains and steamships. He directed leprosy investigations which led to the establishment of the Federal institution for lepers at Carville, La. Under his administration the Public Health Service also inaugurated venereal disease prevention and control work in coöperation with the states.

During World War I he was Chief of the Federal Health Service which, with the Red Cross and state boards of health, set up sanitary safeguards in and around military camps. During his 1920 trip to Europe he also directed efforts to prevent the spread of typhus and other diseases epidemic in Europe during and after World War I into this country by immigrants. In May, 1928, he served with a board of medical officers in Washington who revised quarantine regulations to prevent international transmission of disease by airplane travelers. He retired in 1932.

Dr. Blue was President of the American Medical Association in 1915. He was a Fellow of the American College of Surgeons and held membership in many other scientific societies. He had received honorary degrees from the Universities of Maryland, Wisconsin and Michigan, and the University of Virginia made him an honorary member of Phi Beta Kappa. The President of France bestowed upon him the insignia and ribbon of a chevalier of the Legion of Honor in 1922. He held membership in many social and fraternal organizations in the District of Columbia, including the University, Metropolitan, Chevy Chase, Army and Navy Clubs and Sons of the Revolution and Sons of the War of 1812.

Dr. Blue was a native of Marion, S. C. He had never married. His brother, Rear Admiral Victor Blue, died in 1928. Surviving him are three sisters in Marion and a niece, Mrs. Fritz N. Johnson, 1709 Upshur Street, N. W. For more than 25 years Dr. Blue had lived in Washington at the Benedict Hotel.

Diabetic Deaths—Reed

(*Continued from page 268*)

hypertensive heart disease, myocarditis, angina pectoris, acute cardiac dilatation, hypertension, and cerebral embolism.

During the period 1924–1944 1,985 or 59.1 per cent of the total 3,348 deaths were due to primary causes other than diabetes but in which diabetes was recorded as a secondary or contributory factor. Of the 1,985 cases, 1,471 or 74.2 per cent of the patients died of cardiovascular renal disease, 147 or 7.4 per cent died of pneumonia, 58 or 3 per cent died of tuberculosis, and the remainder died of the other causes recorded in table 7-A.

SUMMARY

A comparative study of deaths of diabetics in two periods, 1903–1923 and 1924–1944, is presented which represents approximately a 21-year period prior to the general use of insulin and approximately a 21-year period after the general use of insulin. The data used are derived from official death certificates as recorded with the Bureau of Vital Statistics of the Health Department of Washington, D. C. Due consideration must be given to the weaknesses inherent in such statistics.

Toothpick in Peritoneal Cavity—Orr

(Continued from page 283)

bladder," acute appendicitis, acute diverticulitis or acute pelvic inflammation is not suspected. It is important to recognize a surgical abdomen, and it is equally important to operate early. In cases of "acute surgical abdomen" an incision should be made which can be lengthened if needs be to take care of any acute condition in the abdomen.

BCG Vaccination

(Continued from page 299)

that BCG vaccination must not be regarded as a substitute for approved hygienic measures or for public health practices designed to prevent or minimize tuberculous infection and disease. Vaccination should be regarded as only one of many procedures to be used in tuberculosis control. Vaccination seems unwarranted: (a) in areas in which the tuberculosis mortality rate is extremely low, and (b) in localities in which the tuberculin test is of especial value as a differential diagnostic procedure."

Membership

(Continued from page 300)

Associate Members

Robert Chester Burnham, 1217 Valley Avenue, S.E.
John Oliver Nestor, McLean Medical Center, McLean, Va.

The following applicants for membership will be voted on at the meeting of the Executive Board, June 28, 1948:

For Active Membership

Hugh Gambel Clark, University of Texas—1934
Peter D. Comanduras, Tufts College—1933
George W. Hoover, Jr., George Washington University—1944
Marcel Paul Houle, Georgetown University—1944
Morris Irwin Michael, George Washington University—1942
V. John Murgolo, Hahnemann College—1939
Joseph Ney, Harvard University—1935
John William Ridenour, Jr., Georgetown University—1931
Sydney Ross, Harvard University—1943
Andrew Tessitore, Georgetown University—1945

For Associate Membership

Harrison Picot, University of Virginia—1930
Joe Milton Van Hoy, Duke University—1938

Washington Physicians of Yesterday—Roy

(Continued from page 297)

He did not cultivate hospital and teaching appointments, and was not indebted to those aids for his advancement. He was one of the directors of Casualty Hospital, about 1897–99, and in later years was an incorporator and member of the Board of Directors and Consulting Staff of Emergency Hospital.

A keen observer and constant student, he was an active participant in the scientific proceedings of various medical societies, and he made numerous and important contributions to medical literature. His published articles embraced some twenty-four titles, covering a considerable range of topics—cardiovascular disorders, dietetics, historical papers.

He was a member of many medical societies: the Medical Association (1887) and the Medical Society of the District of Columbia (1888), American Medical Association, American College of Physicians, Medical Society of Virginia, Southern Medical Association, American Therapeutic Society, Medical History Club of Washington (1908–18), and others. He was also a member of the University Club of Washington and the Colonnade Club of the University of Virginia; and he was memorialized in "Who's Who in America."

In the Medical Society of the District of Columbia his only official service until 1910 was a minor committee assignment in 1894. In 1910 he served as Vice President, and from that time on he rendered continuous active official and committee service for the Society. He was its President in 1918; member at various times of the Executive and numerous other committees; and an active and helpful member of the Building Committee which effected the erection of the Society's Home building in 1920.

From 1914 he was Alternate Delegate, and 1927–29 Delegate, to the American Medical Association, and as such he rendered important and creditable service. His outstanding achievement in that connection was his successful bringing about the great honor to the Society of the election of Dr. William Gerry Morgan to the presidency of the American Medical Association for 1930.

Dr. Roy bore an amazing facial and bodily resemblance to the great French leader in the first World War, Georges Clemenceau, which caused general comment and much puzzlement and wonder to on-looking strangers.

Dr. Roy married Alice Fitz Hugh, of Fredericksburg, October 23, 1890. Like many another physician, he developed angina pectoris, which prostrated him for many months and caused his death December 18, 1929. A memorial meeting of the Medical Society was held in his honor April 16, 1930, at which eloquent tributes were expressed of the esteem and affection in which he was held by his associates.

John B. Nichols, M.D.

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STREPTOMYCIN

A Review of the Basic Principles and Their Clinical Application

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STREPTOMYCIN is the result of a systematic search for an antibiotic of value in infections in which penicillin and sulfonamides are ineffective. The properties and therapeutic efficacy of streptomycin have been extensively studied during the past three years and its usefulness delineated. This review of accumulated data summarizes the facts deemed important to the clinician. Our experiences in the use of streptomycin in 216 patients will be reported, together with a summary of current concepts regarding the effect of this drug in various diseases. One hundred eighteen of these cases have been reported elsewhere.[1, 2, 3]

PRODUCTION

Streptomycin was discovered by Schatz and coworkers[4] as the result of the screening of the products of microörganisms for a substance possessing antibacterial activity against gram-negative bacteria. Certain strains of *Streptomyces griseus* were found to produce such an antibiotic when grown in either aerated or stationary culture medium containing a complex growth factor found in meat extract or corn steep liquor. During commercial production the growth is separated from the medium after a suitable period of incubation and the streptomycin absorbed from the latter onto charcoal. Further purification is accomplished by elution with dilute acid solutions, precipitation as a complex salt, and resolution and reprecipitation with suitable solvents and salts. The final product is a white or yellow powder, distributed commercially as the sulfate, hydrochloride, trihydrochloride calcium chloride (calcium chloride complex or double salt) or phosphate.

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* Formerly Fellow in Medicine, George Washington University School of Medicine.

CHEMICAL STRUCTURE AND PROPERTIES

The structural formula of streptomycin has been tentatively proposed as $C_{21}H_{39}N_7O_{12}$.[5] Two components result from acid hydrolysis: streptidine, an organic base related to inositol, and streptobiosamine, a disaccharide. There is evidence that there may be 2 streptomycins.[6] Streptomycin is a stable basic substance soluble in water and insoluble in most organic solvents. The antibiotic is hygroscopic, optically active, and forms salts with acids. The salts are highly soluble in water.[7]

STABILITY

Commercial preparations containing 3 per cent moisture or less have maintained their potency for 18 months, and sterile solutions have retained their activity for at least 10 months at room temperature.[8]

There are many factors which influence the antibiotic effect of streptomycin in vitro.[9–17] Streptomycin is more active in an alkaline than an acid medium, although pronounced alkalinity results in destruction of the antibiotic. The inactivity of streptomycin in an acid medium is not due to destruction, but rather to an inhibition of its action. The activity of the antibiotic can be restored by an upward adjustment of the pH. The interference with the antibacterial activity of streptomycin in the presence of phosphates and of sugars, such as glucose, is undoubtedly related to the dissociation of these substances to form an acid solution. Streptomycin should therefore not be administered in solutions containing these substances. Reducing substances such as cysteine, vitamin C, and others also partially inactivate streptomycin. A partially reduced compound, dihydrostreptomycin, has been produced and has been shown to possess an antibacterial spectrum similar to, but not identical with, the parent substance. Among the oxidizing agents, potassium permanganate and hydrogen peroxide are most effective in inactivating the antibiotic, and therefore these two drugs should not be used concurrently with streptomycin in local therapy. The reports on the effect of various salts, particularly sodium chloride, on the activity of streptomycin are conflicting. Some studies indicate that salts have a favorable effect, whereas others report evidences of inhibition. On the basis of these results it would be best to administer streptomycin in distilled water whenever possible. It should be remembered that streptomycin reacts with alkaline copper sulfate and that urine containing 1,000 units or more of streptomycin will reduce Benedict's reagent.

Streptomycin is not inactivated by serous body fluid, pus, or normal tissue secretions such as gastric or duodenal juice.[18–21] Defibrinated blood and normal urine do not affect its antibiotic activity. The effect of serum on streptomycin activity is variable, depending on the amount of serum and the organism involved. Some studies indicate that against some organisms serum enhances the action of streptomycin, whereas against others there is no effect and even inhibition of activity. Whether the effect is due to the formation of an inactive compound of streptomycin and serum, or the enhancement of growth of bacteria by serum is not yet established.

Under anaerobic conditions, in an atmosphere of hydrogen, nitrogen, or carbon dioxide, the activity of streptomycin is reduced. In the presence of carbon dioxide the inactivity is due to the resulting acid reaction in the medium, and is prevented by the addition of potassium bicarbonate.[9]

These observations are of value in the interpretation of the results of the determinations of the sensitivity of bacteria to streptomycin and the assay of the streptomycin in the body fluids.

In addition, consideration must be given to other factors such as the strain of microörganism involved, the age of the culture, the size of the inoculum and the length of incubation. The effect of these factors is discussed under "Mode of Action." The result may also be influenced if the body fluid to be examined contains native antibody against the test organism. Strict comparison of results is impossible unless similar technics were employed. Undoubtedly some of the confusion concerning the properties of streptomycin is due to differences in the methods of study.

Assay

The assay of streptomycin is performed microbiologically and depends upon a comparison of the inhibition of the growth of a susceptible test organism by the material to be tested with the inhibition obtained by a known quantity of a standard preparation. There are a variety of methods and test organisms, but essentially the methods fall into two types. In the agar plate method the test organism is seeded in the agar and a comparison made between the areas of inhibition about the standard and unknown solutions which are placed in glass cups or on filter paper discs. In the serial dilution method the inhibition of the test organism produced by two-fold dilution of the unknown solution in suitable medium is compared with the inhibition by similarly diluted standard solution.

Preliminary studies with the use of chemical methods for determining the concentration of streptomycin in body fluids indicate that these tests may supplant the biologic methods of assay.[22]

Potency

Originally streptomycin was measured in terms of units based on biologic assay. According to the regulations promulgated by the Food and Drug Administration, the crystalline material was to be measured by weight.[23] Fortunately it was found that 1 microgram very nearly corresponded to 1 unit. Quantities are now expressed in terms of weight of pure base in grams, milligrams or micrograms:

1 Gm. = 1,000 mg. = 1,000,000 mcg. or units
0.1 Gm. = 100 mg. = 100,000 mcg. or units
0.01 Gm. = 10 mg. = 10,000 mcg. or unit
0.001 Gm. = 1 mg. = 1,000 mcg. or units

Bacterial Spectrum

Streptomycin is active against a large number of aerobic bacteria in the gram-negative, gram-positive and the acid-fast groups. In the last group *Mycobacterium tuberculosis* is of particular significance. Susceptibility varies considerably from species to species and from strain to strain of the same species. Streptomycin is ineffective or has a limited effect against the gram-positive spore-forming pathogenic anaerobes, and against most fungi, viruses, protozoa and spores.[24–30] These data are presented in table 1. Although streptomycin has been found to be highly active against strains of *Brucellae* and *E. typhosa* in the test tube and in experimental infections, the antibiotic is apparently ineffective clinically.

Mode of Action

Against susceptible bacteria streptomycin in adequate concentrations is bactericidal and in lower concentrations bacteriostatic.[24, 25, 31–34] Although this bactericidal action is more marked against young cultures than against older cultures, streptomycin is active against bacterial cells in all states of activity. The larger the bacterial population the greater the amount of streptomycin necessary for complete inhibition. Many bacteria undergo morphologic changes on exposure to streptomycin.

The mechanism of action of streptomycin is still uncertain, although there is evidence that streptomycin interferes with some enzyme system necessary for growth or metabolism. The exact system is undetermined although several enzymes have been implicated. It has been demonstrated that streptomycin is not absorbed or destroyed in the process of inhibition.

TABLE 1

Susceptibility of Various Microörganisms to Streptomycin

VERY SUSCEPTIBLE	MODERATELY SUSCEPTIBLE	SLIGHTLY OR NONSUSCEPTIBLE
Aerobacter aerogenes	Escherichia coli	Clostridia
Bacillus anthracis	Hemophilus influenzae	Streptococcus fecalis
Mycobacterium tuberculosis	Hemophilus pertussis	Spirochetal group
Pasteurella pestis	Hemophilus ducreyi	Rickettsiae
Pasteurella tularensis	Klebsiella pneumoniae (Friedländer's bacillus)	Viruses
Donovania granulomatis	Klebsiella ozenae	Fungi
	Dysentery bacilli	
	Vibrio comma	
	Proteus vulgaris	
	Pseudomonas aeruginosa (Bacillus pyocyaneus)	
	Salmonellae	
	Eberthella typhi	
	Brucellae	
	Neisseria gonorrhoeae	
	Neisseria intracellularis (meningococcus)	
	Staphylococci	
	Streptococcus hemolyticus	
	Streptococcus viridans	
	Diplococcus pneumoniae	
	Corynebacterium diphtheriae	
	Streptobacillus moniliformis	
	Mycobacterium leprae	
	Actinomyces	

RESISTANCE

Susceptible bacteria become resistant to streptomycin with relative ease in vitro by repeated transfers in increasing sublethal concentrations of streptomycin.[35–46] Pronounced resistance may also develop during therapy and is generally thought to be due to inadequate doses or factors which interfere with the distribution or activity of streptomycin. Microörganisms that become resistant to streptomycin may show a change in morphology and staining properties, and a decrease in biologic properties. There is no loss of virulence, however, and the resistance is permanent. Resistance developed in vitro persists upon inoculation in an experimental animal. There is generally no relationship between the susceptibility of an organism to streptomycin and its response to penicillin and sulfonamides.

Several investigators[47, 48] have reported that after exposure of susceptible bacteria to streptomycin, strains can be isolated which are dependent on streptomycin for survival. This phenomenon has also been observed in experimental infections. Welch and associates[49] noted an increase in mortality in animals infected with strains of *E. typhosa* previously exposed to streptomycin when treated with this antibiotic.

The mechanisms by which bacteria become resistant to streptomycin are still a matter of speculation. One theory[50] is that the bacteria adapt themselves to grow in the presence of the antibiotic by substitution or alteration of the involved enzyme systems required for growth or metabolism. The other theory[51] is based on the fact that in any bacterial population the susceptibility of the members varies considerably. Streptomycin destroys the more susceptible while the resistant members persist. It is an application of the theory of the survival of the fittest.

ABSORPTION, EXCRETION AND DISTRIBUTION

Streptomycin is rapidly absorbed following parenteral administration.[52–60] After intravenous injection a peak level is reached within a few minutes, whereas after intramuscular injection a maximum level is not attained for one-half to 1 hour. By that time the excretion of the intravenous dose has been so rapid that the concentrations in the blood are approximately the same as for the intramuscular method. Thereafter there is a gradual excretion of the drug, with the levels in the blood persisting for a slightly longer period of time following intramuscular injection. The height and duration of the levels are dependent on the dose (table 2). Subcutaneous injection gives results similar to intramuscular administration, but this method has been abandoned because of the incidence and severity of local reactions. Streptomycin given parenterally is excreted exclusively by the glomeruli. About two thirds of the amount administered is recovered in the urine, and less than 6 per cent is found in the feces.

TABLE 2

*Average Serum Streptomycin Concentrations Following Intramuscular Administration**

DOSE *Gm.*	DURATION IN SERUM (HOURS)						
	1	2	3	4	6	9	12
	Micrograms of Streptomycin per c.c. of Blood						
0.05	4	3	1	0.5	—	—	—
0.1	6	4	3	2	1	—	—
0.2	9	8	6	4	3	1	—
0.3	12	10	8	6	4	3	1
0.4	15	12	10	8	6	4	2
0.5	18	16	12	10	8	6	3
1.0	24	20	18	16	12	9	6

* These results are the averages obtained from a compilation of our data plus data from the reports of several investigators.

After oral administration only traces appear in the blood and urine and about 98 per cent is recovered in the feces. The failure of streptomycin to enter the blood stream following oral administration is obviously due to lack of absorption and not to destruction within the gastrointestinal tract.

Only small amounts of streptomycin appear in the blood and urine after inhalation.

Doses of 10 to 20 mg. given intrathecally will result in significant concentrations in the cerebrospinal fluid for at least 24 hours.

Streptomycin will be found in most of the tissues of the body following parenteral injection. The concentrations in some are extremely low and are dependent on the dose and duration of treatment. There is no penetration into the cerebrospinal fluid, except when the meninges are inflamed; but even then the amount is not dependable for therapeutic purposes. Diffusion into the pleural and pericardial fluid is good unless the fluid is thick. Local therapy should be used in the treatment of infections of these serous cavities, however, since diffusion following parenteral therapy is not dependable. Diffusion of streptomycin into the peritoneal cavity is generally adequate for therapeutic purposes.

Streptomycin is not concentrated by the liver or gallbladder, and therefore the levels in the bile are lower than those found in the blood. The biliary concentrations of streptomycin are dependent on liver function and are decreased in the presence of impairment. The antibiotic is not found in the gallbladder when the cystic duct is obstructed, since it is transported in the bile and not absorbed from the blood by this organ.

Streptomycin readily passes across the placenta and has been found in the umbilical cord blood, fetal circulation, and amniotic fluid in concentrations approximately one-half those found in the maternal blood at that time.

The absorption and distribution of streptomycin into the eye has been studied in rabbits. Good levels have been readily achieved in the ocular fluids of these animals after intravenous administration, with highest concentrations obtained in the secondary aqueous. No penetration into these fluids occurred with local instillation unless the cornea had been damaged or iontophoresis employed.

ADMINISTRATION

Of the available parenteral methods of administration, only intermittent intramuscular injection is generally employed. Intravenous and subcutaneous administrations have generally been abandoned because of the increased incidence of constitutional and local reactions obtained, respectively, with each method. The dose is best dissolved in 1 to 5 c.c. of distilled water and injected into the gluteal regions, lateral aspect of the thighs, or deltoid area. If this proves too painful, 1 c.c. of 1 per cent procaine solution may be added. Because of the delayed excretion of streptomycin, administration by continuous infusion does not offer any advantages.

In the treatment of meningitis, intrathecal streptomycin in doses of 10 to 50 mg. daily, dissolved in 5 to 10 c.c. of isotonic salt solution, should be given concomitantly with parenteral therapy. Doses of more than 50 mg. may produce signs of meningeal irritation, and doses of 100 mg. are frequently followed by a reaction. The streptomycin solution should be injected slowly and only after a slightly greater volume of spinal fluid has been withdrawn. Similar doses may be given into the ventricles or the cisterna magna. For intrapleural injection, daily doses of 50 to 500 mg. may be dissolved in a volume of isotonic sodium chloride solution up to two thirds of the amount of pleural fluid withdrawn. Similar doses dissolved in 10 to 100 c.c. of isotonic salt solution are recommended for intrapericardial injection. As much as 1 Gm. has been put into the peritoneal cavity at the time of operation.

Local treatment of inflammatory conditions of the trachea and bronchial tree is accomplished either as an aerosol or by direct intratracheal instillation. Doses of 50 to 100 mg. in 1 to 2 c.c. of isotonic salt solution or distilled water may be nebulized at intervals of 2 to 6 hours. It is not feasible to use more concentrated solutions, since they clog the nebulizer and cause frothing. Intratracheal instillations of 5 c.c. of streptomycin solution containing 10 mg. per c.c. have been used with good results. Since only negligible amounts of streptomycin are absorbed into the blood after inhalation, it is believed that the antibiotic should be given parenterally for infections of the lung.

Since practically none of the antibiotic is absorbed or destroyed within the gastrointestinal tract, it has been suggested that it be used to reduce the number of bacteria in the preparation of patients for bowel surgery and for the treatment of intestinal infections. Two to 6 Gm. may be given daily in orange juice or other liquids in divided doses.

Streptomycin in concentrations of 10 mg. per c.c. may be used in nose drops or for instillation into the conjunctivae for the treatment of susceptible infections of these structures. Five drops every 3 hours may be instilled into each nostril, and 2 drops every 4 hours in each eye. Up to 20 mg. per c.c. may be used for instillation into the external auditory canals in the treatment of suppurative otitis. It has been applied locally to wounds in concentrations of 0.2 to 0.5 mg. per c.c. as wet dressings or in doses of 10 mg. per gram of ointment.

CLINICAL USE

In table 3 are presented the results of our experience with the use of streptomycin. Each

TABLE 3

Results of Streptomycin Therapy of Various Infections

DISEASE	NUMBER OF PATIENTS	IMPROVED OR RECOVERED	FAILED OR DIED
Urinary Tract Infections	32	21	11
Meningitis:			
H. influenzae	7	7	0
K. pneumoniae	1	0	1
Others	4	3	1
Pulmonary Infections:			
H. influenzae	2	2	0
K. pneumoniae	3	3*	0
Others	3	3	0
Bacteremia	3	1	2
Endocarditis	3	1	2
Otitis Media	1	1	0
Peritonitis	1	1	0
Tularemia	1	1	0
Typhoid	5	0	5
Salmonella	9	5*	4
Gonorrhea	1	1	0
Granuloma Inguinale	66	66	0
Chancroid	34	34†	0
Tuberculosis	40	32	8
Miliary	5	1	4‡
Meningitis	3‡	1	2
Pulmonary	1	1	0
Upper respiratory tract	2	1	1
Draining sinuses	4	4	0
Lymphadenitis	3	1	2
Pericarditis	1	0	1
Empyema	4	4	0
Pre- and postoperative	20	20	0

* Effect uncertain.

† One patient relapsed 6 weeks after treatment completed.

‡ Three patients developed meningitis during therapy for miliary tuberculosis and are considered only in the latter classification as far as total patients are concerned even though 1 is improved.

disease is discussed separately with particular reference to method of treatment advocated and results to be anticipated. The conclusions are based on our results plus those of other investigators. In those infections in which our experience has been limited the conclusions represent a consensus gathered from the literature.[61]

URINARY TRACT INFECTIONS

Streptomycin has received an extensive clinical trial in the treatment of urinary tract infections.[62–64] In every case an attempt should be made to isolate the causative organisms. Sulfonamides or mandelic acid should be given an adequate trial before streptomycin is employed. Treatment in the presence of urinary tract obstructions, including calculi and catheters, will generally result only in temporary clearing of the urine and in rendering the causative organisms resistant to the action of streptomycin. These should be removed if possible, before streptomycin is started. Whenever possible the in vitro sensitivity of the causative organism to streptomycin should be determined and the dosage schedule established accordingly. Naturally resistant strains may be encountered which not only make the use of streptomycin futile, but dangerous when the possibility of toxic reactions is considered. If it is not feasible to delay treatment, doses of 3 to 4 Gm. should be given until the sensitivity càn be ascertained. Although relatively large amounts of streptomycin may be found in the urine with the use of small parenteral doses, the most important factor in the success of therapy is the presence of adequate concentration in the blood and tissues. Furthermore, local therapy has proven ineffective. The dose should therefore be based on the achievement of adequate bactericidal concentrations in the blood. The commonly recommended doses of 1 to 2 Gm. daily are adequate only for infections caused by highly sensitive organisms, but doses of 3 or 4 Gm. should be used for more resistant strains or when a sensitivity study is not available. It has been demonstrated that unless the urine is maintained at an alkaline pH streptomycin is relatively ineffective. Daily doses of 12 to 18 Gm. of either sodium bicarbonate or potassium citrate are required to insure adequate alkalinity. Treatment is usually completed in 4 to 7 days. It has been noted that in some patients relief of symptoms is occasionally achieved without bacteriologic cure, and in others the presence of anatomic lesions results in a persistence of symptoms in spite of eradication of the bacteria. In neurogenic bladders the effect is usually only palliative in that the acute stage is controlled.

INFECTIONS OF CENTRAL NERVOUS SYSTEM

Even the most satisfactory treatment for *Hemophilis influenzae* meningitis prior to the discovery of streptomycin resulted in only a 74 per cent recovery rate.[65] The effectiveness of streptomycin against these bacteria in vitro led to an early clinical trial of streptomycin in this disease. It is difficult to evaluate the results of the use of the antibiotic alone from reports in the literature because many patients received sulfonamides and antisera in addition. Some investigators are of the opinion that sulfadiazine should be given in addition to the streptomycin, since secondary infections due to gram-positive bacteria have been reported with the use of streptomycin alone. At the present time it appears that adjuvant therapy with antisera is not necessary unless the patient is severely or critically ill, treatment delayed, there is no improvement within 24 to 48 hours, or after an initial response the patient relapses. The development of resistant strains of *H. influenzae* have been reported and this phenomenon should be looked for in the presence of a clinical or bacteriologic relapse. Frequent spinal fluid examinations are mandatory. Generally, at least 4 to 7 days of streptomycin therapy are necessary in doses of 3 to 4 Gm. intramuscularly and 10 to 25 mg. intrathecally per day. In children the recommended dose is 20 mg. per pound every 3 hours plus intrathecal doses of 5 to

10 mg. at 12-hour intervals for the first day and daily thereafter.

It is difficult to evaluate the effect of streptomycin therapy on meningitis due to other gram-negative bacilli. The prognosis depends on many factors, such as the age and condition of the patient, duration of infection, and virulence of the infecting organism. Available data, however, suggest that patients with these types of meningitis should be given the benefit of full doses of streptomycin both intramuscularly and intrathecally. It may be wise to add sulfonamides for the reason previously mentioned.

Brain abscesses caused by streptomycin-sensitive bacteria are best treated by surgical drainage supplemented by antibiotic therapy given both parenterally and by local instillation. Maximum doses should be given by the parenteral route, since streptomycin passes into central nervous system tissues poorly. No more than 50 mg. should be instilled locally into the abscess cavity because larger doses have produced symptoms indicative of cerebral irritation.

RESPIRATORY TRACT INFECTIONS

Acute pulmonary infections caused by gram-negative organisms are relatively infrequent, but nevertheless are of such a serious nature and so poorly amenable to available therapy that streptomycin deserves a trial in all cases.[66] Best results are obtained when treatment is instituted early. This is dependent on accurate diagnosis, particularly on careful bacteriologic study of the sputum. In general, for all types of gram-negative bacillary pulmonary infections the recommended dose is 3 to 4 Gm. of the antibiotic per day until the temperature has been essentially normal and the signs of active infection have abated for a period of 3 to 4 days.

The results of streptomycin therapy in influenzal pneumonia are generally good with prompt response and disappearance of the organisms from the sputum. On the other hand, in Friedländer's bacillus pneumonia satisfactory results have been obtained in only about 50 per cent of the patients treated. These relatively poor results are undoubtedly explained by the fact that marked pulmonary cavitation with thick viscid exudate develops early. Patients with streptomycin-sensitive *Klebsiella pneumoniae* pulmonary infections should be given the benefit of full therapeutic doses of streptomycin. Some investigators are of the opinion that full doses of sulfadiazine should be used concomitantly.

The sputa of patients with chronic pulmonary infections such as bronchiectasis are frequently found to contain gram-negative rods in addition to the more prominent gram-positive organisms, and occasionally the gram-negative bacilli are the predominant organisms. Streptomycin alone or in combination with penicillin has been found to be extremely successful when used with postural drainage as a palliative measure or in preparation of patients for surgery.[67] When used as a palliative measure, the volume of sputum diminishes, the gram-negative bacteria disappear, the patient's general condition improves, and the incidence and severity of superimposed pneumonitis decrease. It appears that the best results are obtained with combined parenteral and aerosol therapy in doses of 2 Gm. per day intramuscularly in divided doses every 4 to 6 hours, plus 0.5 Gm. in 20 c.c. of solution inhaled in divided doses every 2 to 6 hours. Daily intratracheal instillations of 50 mg. of streptomycin in 5 c.c. of solution have also been used instead of nebulization. Improvement is usually noted within several days, but treatment should nevertheless be continued for 2 to 4 weeks. The course of therapy may be repeated if the patient relapses. The effect of protracted courses of treatment is undergoing study.

As the result of experience gained with the use of streptomycin in empyema due to gram-negative organisms other than the tubercle bacilli, daily doses of 50 to 500 mg. dissolved in isotonic salt solution should be tried for 7 to 10 days. The volume of solution should be up to two thirds of the amount of pus withdrawn. This should be preceded by irrigation of the empyema cavity. A small proportion of patients will recover with this therapy alone. If there is clinical or bacteriologic evidence of persistence of the infection beyond this time, surgical drainage should be instituted. In any event most patients will be more effectively prepared for surgery with the preoperative use of streptomycin.

INFECTIONS OF EYE, EAR AND NOSE

The only reports available[68–70] on the use of streptomycin in infections of the eye indicate that good results have been obtained with corneal ulcers in which streptomycin solution or ointment was applied locally. The recommended dose is 2 drops of a solution containing 10 mg. per c.c. every 2 hours day and night.

Streptomycin has been used both locally and systemically in otitis media with variable success.[61] Local therapy consisting of 1 to 20 mg. per c.c. of isotonic salt solution or distilled water instilled 4 times daily for 1 to 7 days has resulted in improvement in only about 50 per cent of the cases. On the other hand, parenteral therapy in doses of 2 to 4 Gm. per day has given excellent results. Mastoid involvement is generally unaffected with the use of streptomycin. Otitis externa has been treated successfully with wicks saturated in solutions of 2.5 to 5 mg./c.c.

Nasal and sinus infections amenable to streptomycin therapy have been treated successfully by aerosol administration of 50 to 100 mg. of the antibiotic in 1 to 2 c.c. of solution every 2 to 6 hours according to the method of Barach. Parenteral streptomycin in doses of 2 to 4 Gm. per day has been used with resulting improvement in symptoms in most cases.[61]

BACTEREMIA

Bacteremia due to gram-negative bacteria or penicillin-resistant gram-positive organisms is an indication for the use of streptomycin.[71] The dose is calculated on the basis of the in vitro sensitivity of the organism to the antibiotic. If it is undesirable to wait for this determination, doses of 0.5 or 1 Gm. every 3 or 6 hours, respectively, should be instituted and later adjusted according to the determined sensitivity of the infecting organism. Treatment should be continued for about 1 week after all evidences of active infection have disappeared. Good results have been obtained in about two thirds of the patients treated. Failures are due chiefly to the presence or development of resistant organisms, impenetrable areas of infection, or far advanced stages of the disease when treatment was begun.

BACTERIAL ENDOCARDITIS

Only a few cases of endocarditis treated with streptomycin have been reported.[61] Streptomycin is indicated not only in the treatment of endocarditis due to gram-negative bacteria, but in endocarditis due to penicillin-resistant, gram-positive bacteria sensitive to streptomycin in vitro. Treatment should be continued for 56 days with doses which will maintain concentrations in the blood 4 to 8 times the in vitro sensitivity of the causative organism.

SURGICAL CONDITIONS

In general, the results of streptomycin treatment of peritonitis both clinically and experimentally have not been spectacular, although definite beneficial effects have been noted in some cases.[72, 73] The response is slow, particularly in the presence of localized pocketed collections of pus, but it appears that the course is almost always shortened and complications reduced. Factors contributing to failure are the presence of walled-off collections of pus and the presence of a mixed infection containing bacteria not susceptible to streptomycin. At present, it is difficult to know what to recommend in the treatment of peritonitis. Penicillin alone, in massive doses, or combined with sulfonamides, has been advocated. It may be that the optimum treatment will consist of streptomycin and large doses of penicillin in combination. As much as 1 Gm. of streptomycin has been instilled locally at operation. Treatment may be continued with

4 Gm. per day intramuscularly in divided doses since diffusion into the peritoneal cavity is good.

Other surgical conditions for which streptocycin has been used either locally or systemically or in combination include infections of the soft tissues, wounds, or bones.[74, 75] The antibiotic should be used only when sensitive organisms are present. Mixtures of bacteria are more difficult to eradicate despite the use of combined antibiotic therapy. The method of administration and duration of therapy is dependent on the type of wound. For superficial wounds local therapy may be sufficient when treated with wet dressings saturated with 2 to 5 mg. per c.c. of solution, or with daily applications of an ointment containing 10 mg./Gm. until healing is essentially complete.[76] Extensive wounds require parenteral treatment in doses of 2 to 4 Gm. per day. Antibiotic therapy seldom obviates the need for adequate surgery.

Infections of the biliary tract (liver abscesses, cholecystitis, cholangitis) due to streptomycin-sensitive bacteria may be amenable to therapy if biliary drainage and liver function is unimpaired. Doses of 3 to 4 Gm. per day until symptoms of active infection have subsided are advised.

TULAREMIA

The response of acute tularemia to small doses of streptomycin (0.4 to 2.0 Gm. daily) is undoubtedly the most dramatic accomplishment of this drug.[77] Morbidity and mortality have both been reduced in all forms of the disease, ulceroglandular, cryptogenic, and pulmonary. Response has been particularly gratifying in severely ill patients with complicating tularemic pneumonia. The organisms disappear rapidly from the ulcers, sputum or pleural fluid. The rapidity and height of the rise of the serum agglutinin titers is unrelated to the use of streptomycin.

EBERTHELLA (TYPHOID) INFECTIONS

Although most strains of *Eberthella typhosa* are sensitive to therapeutically attainable concentrations of streptomycin, this antibiotic has been employed in this disease without obvious effect. The duration of illness has not been reduced during the acute stage, and the carrier state has not been influenced by either parenteral or oral administration of large amounts of streptomycin.[52, 61, 78]

SALMONELLA INFECTIONS

Streptomycin therapy of Salmonella infections has also been without significant effect, although too few cases due to any one strain have been collected to permit definite statements.[78] Although constitutional symptoms and diarrhea decreased and the organisms disappeared from the stools in some patients, similar results are frequently observed in untreated patients. Furthermore, many treated patients continued to have positive cultures in spite of adequate therapy. The results have been the same regardless of whether parenteral or oral therapy, or both, were employed. Since streptomycin appears to be effective in some acute cases, the recommended dose is 2 to 3 Gm. per day both intramuscularly and orally for 3 to 16 days. Most investigators are of the opinion that streptomycin should be employed only after sulfonamides have failed.

BRUCELLOSIS

Streptomycin alone in brucellosis has been unavailing. It is possible that doses of 4 Gm. per day plus full doses of sulfadiazine for 3 weeks may produce good results.[78]

SHIGELLA INFECTIONS AND CHOLERA

Preliminary reports indicate that bacillary dysentery[78] and cholera[79] respond promptly to streptomycin therapy with the use of 2 to 3 Gm. per day orally and intramuscularly in divided doses for 7 to 10 days. In the patients with dysentery, diarrhea and fever subsided promptly and the organisms disappeared promptly from the stools. Whether the streptomycin or the supportive measures were responsible for the excellent results in cholera remains to be determined.

VENEREAL DISEASES

Streptomycin has proven to be a very valuable adjunct in the treatment of venereal diseases. Chinn and co-workers[80] have reported cures in 77 patients with proven gonorrhea employing 0.3 to 0.5 Gm. of streptomycin. At present it is indicated for treatment of patients who have a persistence of symptoms in spite of adequate therapy with penicillin and sulfonamides. One of us[3] has successfully treated 66 patients with proven granuloma inguinale with 1 Gm. a day in divided doses every four hours or in a single injection intramuscularly for 5 to 58 days. The lesions healed completely.* Similar results have been reported by others.[81] Kupperman and associates[82] have had excellent results with the use of 4 Gm. per day for 5 days. Since the *Hemophilus ducreyi* is susceptible to the action of streptomycin, it may be used in chancroid resistant to sulfonamides. One of us[2] has treated 34 patients with 1 Gm. a day in divided doses every 4 hours or in a single injection for 9 to 21 days with complete healing of the lesions in all cases.

TUBERCULOSIS

The chronic nature of tuberculosis necessitates a prolonged period of treatment and extended follow-up observation before the value of any therapeutic agent can be determined. A sufficient number of cases with adequate follow-up have now been treated with streptomycin so that a few tentative conclusions can be made.[83, 84] Considerable work remains to be done, particularly to determine the optimum dosage schedule.

The results in hematogenous disseminated (miliary) tuberculosis have been phenomenal. Some patients have been well long enough now to be considered cured. Most patients have shown a response as evidenced by a decrease in constitutional symptoms, fever and pulmonary findings by X-ray examination. Improvement is usually noted in 2 to 3 weeks. In a few patients the course has been unaffected. Others have relapsed during or shortly after therapy was discontinued, usually with the appearance of resistant organisms. In others the infection has been converted to a chronic focal disease. Meningitis has developed during streptomycin therapy and almost always proves to be fatal. It is now important to establish the diagnosis promptly in order to start treatment early and thus help to insure recovery. Best results have been obtained with 2 to 3 Gm. per day in divided doses intramuscularly for 2 to 3 months.

In tuberculous meningitis the effect of streptomycin has been very encouraging. Adequate therapy consists of 2 to 3 Gm. per day in divided doses intramuscularly for 2 to 6 months, plus daily intrathecal injections of 20 to 50 mg. for 6 weeks. Intrathecal therapy is given daily at first and 2 or 3 times a week later depending on the course. No patient has survived treatment who did not receive the drug intrathecally as well as systemically. Many of the patients who have recovered have some evidence of residual neurologic damage (blindness, deafness, cerebellar dysfunction, mental retardation) or abnormalities of the spinal fluid.

Streptomycin in doses of 1 to 3 Gm. per day (in divided doses) for 2 to 6 months has resulted in a favorable effect upon progressive or stationary exudative pulmonary lesions. About three quarters of the patients show improvement while about 15 to 20 per cent remain unchanged. Within 2 to 3 months after treatment is completed about one fifth of the patients relapse. These patients are frequently found to harbor resistant organisms. Most patients show a decrease in constitutional symptoms, fever, cough, and volume of sputum with disappearance of tubercle bacilli from the sputum and gastric washings. There is no doubt that streptomycin plus bed rest is superior to bed rest alone in exudative pulmonary tuberculosis. The antibiotic is of little value in chronic fibrotic phthisis and in disease with cavities. Resistant organisms are rarely found when treatment is continued for less than 4 weeks, but the incidence increases at an alarming rate thereafter (95 per cent at 18 weeks). At present there is an extensive program under study in which the results of small doses (1 Gm. or less) given at infrequent intervals (once or twice per day) are being evaluated.

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*Two patients relapsed 9 to 11 months later and again responded to treatment.

Although doses of 2 to 3 Gm. of streptomycin have been used extensively in the treatment of extrapulmonary tuberculosis, single daily injections of 1 Gm., and even .05 Gm., appear adequate.[85]

Nearly all ulcerative or granulomatous tuberculous lesions of the larynx, trachea and bronchi have shown healing when streptomycin was given parenterally or combined with aerosol therapy. Aerosol administration alone appears to be ineffective. Fibrotic lesions of the upper respiratory tract are not affected by streptomycin. The significance of the slightly favorable effect of streptomycin given prophylactically prior to surgery for pulmonary tuberculosis on the complications of surgery is as yet undetermined. The results of streptomycin in chronic tuberculous subcutaneous sinuses have been uniformly good, resulting in complete healing in nearly all cases regardless of the underlying disease. Most cases of renal tuberculosis treated to date have shown only temporary improvement with a reduction in symptoms and improvement in bacilluria. The results in tuberculosis of the bones and joints are encouraging. Intrapleural streptomycin in tuberculous empyema has been of little or no value. Pericarditis may be favorably influenced if treatment is started early. Tuberculosis of the peritoneum has responded favorably to streptomycin therapy. Parenteral therapy appears to be adequate. Tuberculosis of the alimentary tract, including the tongue and tonsils, responds well to intramuscular streptomycin. In enteritis, anorexia, pain and tenderness disappear in 3 to 10 days. Diarrhea usually abates in 2 weeks. The effect of streptomycin in ocular tuberculosis is still undetermined. The antibiotic is essentially ineffective in tuberculosis of the skin and lymph nodes.

Toxicity

A consideration of the untoward reactions to streptomycin is made difficult by the fact that many of the reactions reported in the early days of streptomycin therapy were undoubtedly due to impurities. Toxic reactions have been so severe as to necessitate the discontinuance of therapy in about 6 per cent of patients. In general, reactions to streptomycin can be classified into six types: (1) histamine-like reactions; (2) local irritation; (3) hypersensitivity; (4) renal disturbances; (5) neurologic reactions and (6) miscellaneous.[85]

Histamine-like reactions are of historic interest only. With the development of methods to purify streptomycin the histamine present in the impure material has been eliminated with a disappearance of this type of reaction.

Local pain and tenderness has also been reduced to a minimum with the development of the more purified material. If pain and tenderness is marked, this can be decreased by the addition of 1 c.c. of 1 per cent procaine solution. No local reactions have been reported following injection, inhalation or local application to the skin of wounds.

Doses up to 50 mg. of streptomycin injected intrathecally are well tolerated. Although fever and increase in meningeal signs have occasionally been reported, reactions are more frequent with larger doses. Patients receiving streptomycin into the subarachnoid space usually show a persistent white cell count of 180 to 1,500 per cu. mm. (predominately polymorphonuclear leukocytes) while treatment is continued. These reactions do not contraindicate the continued use of the drug by this route because they do not cause any permanent injury.

Some patients will complain of pain over the sacrum and posterior thighs for 12 to 24 hours following intrathecal injection. These usually disappear within 1 to 2 weeks even though treatment is continued. Milder symptoms of sciatica or temporary partial paraplegias and paresthesias, particularly circumoral in distribution, have been noted following intrathecal injection of 0.1 to 0.2 Gm. Repeated intrathecal injections of 0.1 Gm. or doses of 0.2 to 0.4 Gm. may be associated with evidence of toxicity even with purified material. Shortly after the injection of these doses the patient may develop headache, vomiting and nystagmus. During the ensuing 24 hours somnolence and even stupor may develop with bradypnea and urinary retention. Delirium resembling Korsakoff's psychosis has been reported following intrathecal injections of 0.2 to 0.4 Gm. of streptomycin. These reactions disappear within several days after the antibiotic is discontinued. There are reports of deaths following the use of streptomycin intrathecally, although these occurred only with the use of one particular lot and were undoubtedly due to impurities present. Injections of streptomycin into the pleural, pericardial, peritoneal and synovial cavities are well tolerated.

Evidences of hypersensitivity to streptomycin have been observed in the form of fever, skin eruptions, arthralgia and eosinophilia. It is of interest that fever has rarely been observed with the use of highly purified streptomycin.

Rash with or without fever occurs in about 5 per cent of patients, appearing generally between the third and tenth day of treatment. Rashes may be morbilliform, maculopapular, erythematous, vesicular, urticarial or resemble erythema nodosum. They are usually pruritic and may progress to a superficial scaling dermatitis accompanied by periorbital edema and lymphadenopathy. Occasionally the eruption is accompanied by nausea, vomiting, arthralgia, leukopenia, neutropenia and eosinophilia, in addition to fever. An abrupt, temporary fall in blood pressure may be associated with this syndrome. These phenomena usually appear several days after the start of streptomycin therapy, or on the first day of a second course. If streptomycin is discontinued, the constitutional symptoms usually disappear completely within 24 hours and the rash fades within a week.

Eosinophilia may occur as an isolated phenomenon or in conjunction with fever and rash. It may be present intermittently for 1 to 2 weeks at a time or throughout the course of treatment for as long as 3 months. Usually the percentage of eosinophiles ranges between 10 and 15 per cent with as many as 40 per cent not infrequently observed. The number of eosinophiles usually falls to normal within 1 month after streptomycin has been discontinued.

Whether the above reactions are merely transitory phenomena or a manifestation of a more serious and permanent intoxication is at present unknown. In view of this fact, it is important that streptomycin be given only when indicated and not be used indiscriminately. On the other hand, it appears that the occurrence of these hypersensitivity reactions does not contraindicate the continued use of streptomycin provided the patient is followed carefully. Occasionally, when the reaction is severe and it is necessary to interrupt therapy, treatment may be started again after 3 to 4 weeks. Frequently these second courses will not cause a recurrence of the reaction.

The administration of streptomycin is frequently accompanied by the appearance of granular, hyaline, and occasionally cellular casts. They vary from an occasional cast to as many as 20 per low-power field of a centrifuged specimen, and are more numerous in an acid urine. The casts may appear within 48 hours after treatment is started and be present continuously during therapy or recur sporadically. Cylindruria generally disappears promptly with the cessation of therapy or alkalinization of the urine and is apparently a benign phenomenon. Albuminuria is found only occasionally and is generally of no significance.

In about 1 to 3 per cent of patients, the administration of streptomycin is followed by a significant reduction in renal function as evidenced by increase in the blood urea nitrogen level, reduction in urea clearance tests and concentration-dilution tests. The excretion is decreased and the blood levels elevated. The process is usually reversible and may represent a more advanced form of the same process which produces the sporadic cylindruria and albuminuria. There is a report of the development of a fatal nephritis in a patient with typhoid fever who had received partially purified streptomycin in doses of 4 Gm. per day for 4 days. Fatty changes in the kidneys and liver of animals have been observed after streptomycin therapy. Until more knowledge is acquired regarding this complication it is wise to discontinue streptomycin in the presence of the development of renal insufficiency. It may be possible to reduce the dose of streptomycin in cases in which the drug is essential in order to save life.

The most prominent and serious complication of streptomycin therapy is involvement of the eighth cranial nerve. There are two types of reactions, vestibular dysfunction and impairment of hearing.

The development of vestibular dysfunction is due to the streptomycin itself since it occurs with highly purified preparations. The incidence and severity of this reaction is dependent on the height of the blood level which is determined by the daily dose, the interval between injections, the duration of treatment, and the absorption-excretion characteristics of the patient. In general, with doses of 1 to 2 Gm. per day, the reaction appears at the end of the fourth week, with 3 Gm. by the end of the third week, and during the second week with larger doses. If the smaller doses are continued for less than 10 days there is no clinical evidence of vestibular involvement. In about one third of the patients the reaction is discovered only after careful questioning and examination. It varies in degree from mild to severe in the remaining patients.

Generally, the first sign is the appearance of headache or a heavy sensation in the head which lasts for 24 hours. Shortly thereafter the patient has a sensation similar to vertigo except that the rotatory element is lacking. In addition, there is a sensation of overshooting the mark in the performance of a sudden movement. Occasionally, after a sudden change in position, the patient will notice a momentary delay in focusing the eyes. Nausea and possibly vomiting are likely to be produced with change in position. Nystagmus occurs infrequently as an obvious manifestation.

In the severe form the patients are unable to walk or sit up in bed unassisted and may be extremely uncomfortable even while lying flat. In less severe cases, the patient may be symptomless while sitting up but have difficulty in walking. With the mild cases only a severe stimulus will precipitate the symptoms.

The acute symptoms generally persist for 7 to 10 days and 60 to 90 days elapse before all symptoms disappear. Vertigo disappears within several weeks even though treatment is continued. Most patients continue to have difficulty in ambulation in the dark. A small number experience difficulty in walking even in the daylight for as long as 6 to 8 months. Usually these individuals can walk without ataxia and without watching their feet, by orienting themselves to fixed objects. The amount of functional recovery apparently depends on the degree of compensation, since caloric testing indicates persistent damage. In elderly individuals compensation is generally incomplete.

These reactions serve as a warning to the physician to use streptomycin only when indicated. Acute infections should be treated with as small a dose and for as short a period as possible without jeopardizing recovery. Continuation of the drug in the presence of the development of vestibular dysfunction depends on the prognosis of the disease without streptomycin therapy.

The incidence of deafness as a toxic reaction is not as alarming as the vestibular involvement. There is evidence that the impairment of hearing is due to the streptomycin itself, since it has occurred with the purified as well as the less pure material. Deafness has been observed in patients with tuberculous meningitis who were given the antibiotic intrathecally and in patients with high blood levels resulting from the use of large daily doses (5 to 10 Gm.) or with smaller doses in the presence of impaired renal function. It is difficult to determine whether the deafness in patients with tuberculous meningitis treated with streptomycin is due to the infection or the antibiotic. It appears that the incidence of this reaction is higher in the treated than in the untreated patients. On the other hand, prior to streptomycin, patients usually have not lived long enough for this reaction to become apparent or their conditions were such that it was not possible to detect deafness. Furthermore, deafness has not been seen following the use of intrathecal streptomycin in other forms of meningitis. There is an occasional report on the development of deafness during the treatment of other diseases such as typhoid fever with the use of parenteral therapy. Invariably the doses employed were either extremely high, renal failure was present, or deafness is a complication of the disease.

All patients who are to receive extensive therapy should have an audiometric examination prior to the institution of streptomycin and at frequent intervals (1 to 2 weeks) thereafter. If any reduction in hearing develops, the drug should be discontinued unless it is life-saving. Under those circumstances reduction in the dose should be considered. Furthermore, the status of the renal function should be known, because in the presence of impaired function smaller doses may be employed if the patient is carefully observed.

Generally the deafness is preceded by the development of a constant roaring low-pitched tinnitus. The involvement is usually bilateral and ranges from 50 to 100 per cent impairment. In some patients there is a return of 30 to 50 per cent of function after treatment is discontinued, while in others the loss of hearing is permanent.

It has been reported that streptomycin accelerates the coagulation of blood. Leukopenia occasionally accompanied by a relative granulocytopenia has been encountered during streptomycin therapy in patients with hematogenous tuberculosis and those demonstrating hypersensitivity reactions. The leukocyte count eventually returned to normal after streptomycin was discontinued. Thrombocytopenic purpura has been observed during streptomycin therapy in a case of brucellosis. The number of platelets returned to normal when the drug was discontinued. Diarrhea has been noted on one occasion. Jaundice without evidence of abnormality of liver function as determined by the bromsulphthalein test has also been noted.

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(Continued on page 368)

AN EVALUATION OF THE PEPTIC ULCER PROBLEM*

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IT WAS at first suggested that the title of the talk this evening should be "A Clarification of the Ulcer Problem." But on further consideration this suggestion sounded like a bit of pleasantry, since clarifying the ulcer problem is like clarifying the problem of world peace—at this era of world medicine it just can't be done. This is not to say, however, that a discussion of many phases of the ulcer problem is untimely, for that is indeed not the case. Quite the contrary. The last quarter of a century has taught us much about the nature of this disease.

First of all, there is still the unsolved etiology of this condition. In recent years the old problem of relationship of the psyche to the soma in causation of ulcer has become a topic of lively interest. Popular discussion has placed much emphasis upon the adverse effects of psychic strain and its particular importance in the genesis of ulcer. A stomach ulcer, or more commonly in the popular vernacular, the plural "stomach ulcers," is now regarded as the penalty for worry, overwork, overambition, maladjustment to life's problems, and all the stress and strain that confront modern man. The conception of the sin of worry and the penalty of peptic ulcer is well illustrated by the incident of May 8, 1947, when the Chaplain of the U. S. Senate ended his prayer of the day with the following supplication: "Help us, O Lord, to do our very best this day and be content with today's troubles, so that we shall not borrow the troubles of tomorrow. Save us from the sin of worrying lest stomach ulcers be the badge of our lack of faith. Amen."

To some extent medical experience justifies this popular emphasis upon the psychic factor in the genesis of ulcer; ulcer is, in many instances, truly "the badge of our lack of faith." The psychosomatic factor is recognized and assigned its truly culpable role. The histories of our patients are permeated with emotionally traumatic or mentally corroding circumstances which precede the first occurrence or later recurrences of ulcer, and no one who deals with the problem can fail to be impressed with the importance of the worry and fatigue factor. But that is by no means the whole story. There are many somatic and, indeed, somato-psychic factors which also play their parts in the problem of ulcer, even in the phase of etiology. There is no question that ulcer causes worry, just as worry causes ulcer.

Furthermore, in our observation, the old theory of ulcer diathesis still holds its ground. The penalty of peptic ulcer is inflicted selectively; it penalizes not all who commit the sin of worry, but only those who are constitutionally defenseless in that specific physiologic zone. There are other penalties for those with other diatheses.

The individual with an ulcer diathesis is, in my experience, not externally discernible; it is an oversimplification of the facts of medicine to say that you can spot the ulcer patient by his facies or his demeanor. That obviously worrisome striver whom you suspect may have a digestive tract of iron resistance but be a hypertensive or a future coronary victim, he may pay the penalty entirely within his nervous system, or he may go on to old age, completely unpenalized. Conversely, the externally calm and placid individual often has a burrowing peptic ulcer of undetermined etiology.

Now those two words "undetermined etiology" must still be used to characterize ulcer basically.

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We do not yet know what underlies the ulcer diathesis, what involves some individuals in this disease and exempts others. Does a hormonal factor, a local circulatory condition, or some other as yet unconceived etiologic agent operate as the culprit? That is still the unsolved fundamental question.

Although the basic etiologic factor is still obscure, the secondary etiologic factors have been revealed by years of clinical observation. In the individual with ulcer diathesis a certain combination of psychic and somatic factors, such as tension and worry on the one hand, and smoking, food difficult of digestion, irregular eating habits, lack of rest and exercise, and alcohol, on the other, will invariably induce a recurrence of ulcer and may often be justly considered to be the cause of the first occurrence. I say certain combinations of these factors, because it is my belief that the pernicious influence of tension, fatigue and worry, can, in most instances, be frustrated by meticulous care in the avoidance of smoking and alcohol, the choice of food, and the use of adequate rest and exercise. Practically speaking, at all times the avoidance of smoking and alcohol, care in diet, and the use of adequate rest and exercise will antidote the nervous strain of modern life for the ulcer patient, and at times of great emotional or psychic stress and strain patients with ulcer should use special care in the matter of rest and careful food, as well as in their habitual avoidance of smoking and alcohol. During the War the high incidence of ulcer was ascribed by some to emotional stress and strain and by others to dietary irregularities and hardship or to excessive indulgence in smoking. In my opinion, it was the combination of these psychic and somatic factors which caused ulcers; one group without the other might have been tolerated with impunity.

Associated with this group of secondary causative factors are two physiologic abnormalities which result from the action of these factors, namely, spasm and hypersecretion of hydrochloric acid. In cases of active ulcer, spasm is usually visualized roentgenologically in the pylorus, duodenal bulb, and in the deep peristaltic waves which may traverse the stomach itself. In the jejunal ulcer, it is usually seen at the gastrojejunal stoma. Excessive secretion of acid may be not only in high concentration, but may also be quantitative; this is especially true in those cases in which nocturnal secretion is as high or higher than diurnal secretion. There are then these two physiologic abnormalities, spasm and hyperchlorhydria, which must be combated by treatment.

The diagnosis of peptic ulcer is of great importance, because so much in the life of the patient depends upon its accuracy. Neglect of an existing ulcer may lead to disastrous complications, while an unjustified diagnosis may result in unnecessary restrictions. On the whole, it is my opinion that ulcer is underdiagnosed rather than over-diagnosed.

The history in cases of peptic ulcer may be the typical textbook history of upper abdominal distress, the site of which the patient usually indicates by placing his whole hand on the epigastric area, the distress occurring at a uniform interval after the meals and relieved by any kind of food, warm or cold. Such a history points to spasm and hyperchlorhydria at least and is frequently diagnostic of ulcer. Occasionally the crater or deformity of ulcer is not visualized by X-ray examination, and in such cases, if the history is short, these findings may, in my opinion, be regarded as diagnostic of a pre-ulcer state, which with good prophylactic management may never develop into an actual ulcer.

The typical ulcer history is often confused or made atypical by complications, the complications of the disease itself or of other digestive diseases, particularly cholecystitis, or functional digestive disturbances such as the irritable colon or hypermotility of the small intestine. These functional conditions may, in fact, be induced by treatment of the ulcer, particularly the use of magnesium and the silicates. In such instances it may be difficult to differentiate the ulcer history from the history of generalized and often shifting abdominal distress. occurring at irregular intervals, but with careful evaluation both conditions can be detected and their relationship determined.

Changes in the history of ulcer are of significance, particularly as suggestive of beginning complications, such as obstruction, which may be heralded by nausea or vomiting occurring in cases previously free of these symptoms, or penetration into the pancreas, usually indicated by radiation to the back of pain previously confined to the epigastrium. In the case of gastric ulcer, changes in symptoms due to malignant metaplasia are the classical symptoms of loss of appetite, weight and strength, which, however, occur too late to be of value in the detection of early malignancy.

Physical examination has positive value only by revealing epigastric tenderness to palpation in the acutely active ulcer. The gastric ulcer is often not palpable beneath the costal margin. The duodenal ulcer of the anterior wall and the jejunal ulcer are usually tender to palpation, even when only mildly acute, while the ulcer of the posterior wall of the duodenum is tender only when it is deeply penetrating and in an acute exacerbation. Tenderness at a point to the left of the umbilicus, together with a history of gastroenterostomy or gastric resection and later recurring symptoms, is diagnostic of a jejunal ulcer.

The chemical findings of importance are the hydrochloric acid in the gastric contents after a test meal, and occult blood in the stools. The acid level is significant in the duodenal and jejunal ulcers, both as a part of the diagnostic data and as an index of the effectiveness of treatment. This statement is regarded by some gastroenterologists as unproved by experience, but our experience leads us to the belief that it is fact. In gastric ulcer a change from normal or high acidity to an achlorhydria must be considered suggestive, though not absolutely conclusive, of malignant changes. I have never seen achlorhydria in a patient with active duodenal or jejunal ulcer.

Occult blood in the stools is of great diagnostic importance under controlled conditions. It indicates, of course, either marked congestion and general or localized oozing, or ulceration high in the digestive tract; and when persistent it signifies failure of such ulceration to heal.

It is essential to have confirmation of the diagnosis of ulcer by X-ray examination, as I have already said. The importance of accuracy of diagnosis for the individual in question is so great that no diagnostic procedure, particularly such an effective one as X-ray examination, can be omitted. Both careful fluoroscopic and film examinations are essential in gastroenterology, and it is my opinion that every gastroenterologist should be experienced in fluoroscopic and film interpretation. He will learn as much about the physiologic norms and abnorms from his X-ray experience as from any other phase of gastroenterology.

Diagnostic errors by X-ray examination are more frequently made on the negative than on the positive side; i.e., ulcers are more often not found when present than suspected when absent. Peptic ulcer must be looked for at any point from the lower esophagus through the second part of the duodenum in the unoperated patient, and in the patient who has had gastric surgery in the jejunum as well.

The gastric ulcer of the posterior wall may be easily missed unless as the first swallow of barium outlines the rugae the stomach can be palpated with pressure and the crater detected by retention of barium in a rounded or elliptical area. The typical niche of the gastric ulcer is discernible only when the crater lies near enough to the lesser curvature to protrude from it. Such a niche off the lesser curvature may be missed by fluoroscopic examination and appear as a definite surprise on the films.

The duodenal ulcer is suspected when by fluoroscopic examination there is marked pylorospasm in an otherwise normal stomach or duodenal irritability indicated by rapid passage of barium through a duodenal cap which fails to stay filled. The diagnosis is confirmed by a lack of symmetrical filling, in other words, a deformity of the bulb alone or combined with a filling of a crater.

The jejunal ulcer is more difficult to detect. Here also irritability and spasm at the stoma make one suspect its presence, and a crater, though often difficult to differentiate from a jejunal mucosal fold, is usually defined by its persistence as a fleck when that area of the jejunum is otherwise no longer visualized and by localized tenderness to palpation of the suspected crater.

Occasionally, repeated examinations in cases suspected of ulcer will finally reveal the defect; this is especially true after a recent hemorrhage when for some weeks or months the crater or deformity is often not visualized. A failure to find the typical ulcer defect roentgenologically need not at first be conclusive that there is no ulcer to account for the hemorrhage.

Ulcers of the second part of the duodenum are likewise often difficult to find by X-ray examination. A crater in this area is rarely visualized, and dependence must be placed on narrowing and irritability beyond the peak of the duodenal cap with dilatation beyond the narrowed area, a sign first called to our attention by Dr. Wilkinson of our staff.

Visualization of both stomach wall and duodenal cap with a small amount of barium and pressure palpation is the most effective method yet developed roentgenologically for revealing the obscure ulcer defect. Spot films are used to corroborate and perpetuate the fluoroscopic findings. These procedures are the most valuable additions of recent years to the X-ray diagnosis of ulcer.

For the gastric or marginal ulcer gastroscopy offers us valuable but somewhat limited diagnostic help. Its value is limited to a general survey of the gastric mucosa and to a direct visualization of those lesions which are within its visual field, chiefly in the media and antrum, or at the stoma of the resected stomach. It is especially valuable in determining the degree of healing of gastric ulcers.

With a definite diagnosis of ulcer made, there arises the important problem of therapy. Up to the present at least, we have had to live with the conviction that the recurrent nature of ulcer must be accepted, and that the healing of the first ulcer and maintenance of that healing by a careful regimen of living is the ultimate in therapy. The intractable ulcer has been treated surgically, in earlier days with gastroenterostomy and later with gastric resection, the results of which have by no means been a complete answer to our prayer. To many medical failures, resection has, however, restored comfort, safety, and ability to work.

Short cuts in therapy are now being offered, and all of us who deal with ulcer are ready to accept them with enthusiasm if they are genuine and stand the test of time. I refer, of course, to the new methods of treatment, one surgical and one medical, vagotomy and the use of enterogastrone. Those of us who have lived with ulcer through the last quarter of a century, by our age and experience and particularly by our disappointments in new forms of treatment, have earned the privilege or the right to be skeptics. We demand the test of time to prove whether new hopes are will-of-the-wisps or substantial cures. We have been led up too many blind alleys to want to go along wholeheartedly until we see the goal plainly at the other end. In this spirit, the American Gastroenterological Association has established two committees to study these methods on a national level and to report from time to time as fairly as possible on the results.

Vagotomy must be proven to be a permanent disruption of the path of nervous impulses between the psyche and stomach, thus permanently abolishing the psychic phase of gastric secretion; and it must likewise be proven that no serious damage is thereby done to other organs supplied by the vagus. This operation is a great physiologic experiment, and patients who are having it done are up to the present experimental animals. We must know as soon as possible if the experiment is justified by results. Until time and investigation provide the definite answer, it would seem fair to use the operation only in cases in which all other tried methods have failed, i.e., in cases of jejunal ulcers occurring after one or more gastric resections. Certainly it is, in my opinion, entirely unjustified to use it as a routine treatment for the possibly medically tractable duodenal ulcer, without first having had a very adequate trial of medical management. I know that Dr. Dragstedt, whose pioneer work in this field is most admirable, suggests that for the busy person who cannot change his life or his temperament and who is unwilling to discipline himself by abstinence from smoking and alcohol, this operation offers a safe and satisfactory ulcer cure.

If in five years a careful evaluation of the results of these numerous vagotomies so far done in this country (and they are numerous, running into the thousands)—if this evaluation shows that Dragstedt's hope for a short-cut cure is safe, permanently effective, and has no deleterious side-effects, our admiration and gratitude for his pioneer work will be unbounded. In the 77 cases done so far at the Lahey Clinic, the relief of ulcer pain in previously intractable cases has been immediate and striking. There have been so far 3 ulcer recurrences, 1 with massive hemorrhage and 1 with mild hemorrhage. There have been some postoperative difficulties, chiefly due to impaired motility of the stomach and small intestine, with resultant stasis and the attendant sense of fullness.

The other newer medical treatment which I have mentioned is likewise still inadequately tried. Enterogastrone is, as you undoubtedly know, the extract of hog's upper small intestine, so prepared that the hormone is preserved. This preparation is administered both intramuscularly and orally. It was thought by Ivy and Greengard, who did the early work in this country, to be effective in increasing the local resistance of human mucosa to ulceration and thus to prevent recurrent ulceration. Controls on the effect of this substance are, of course, extremely difficult. Reports vary greatly. Ivy and Greengard's first report showed about 70 per cent non-recurrence of ulcer in patients who had previously had frequent recurrences. The duration of these results is not yet known. The inconvenience of daily or tri-weekly intramuscular injections of the material, enterogastrone, is a serious deterrent, but the orally administered material may prove to have equal value. In our small series of 28 cases, 3 intramuscularly injected and 25 treated orally, there has been 1 massive hemorrhage, and in all but 3 cases the usual routine of antacid has had to be added to provide comfort for the patient.

I should like to repeat once more that these two forms of treatment, vagotomy and the use of enterogastrone, are still unproven, and while the latter can be used with complete safety and results awaited, the surgical procedure of vagotomy must, in my opinion, still be regarded as experimental and possibly deleterious until proved otherwise by time and experience.

What then of the efficacy of the tried and true older methods of treatment? It is my contention that every ulcer, if detected early and treated intensively, can be healed and kept healed. Late diagnoses, half-hearted treatments, and inadequate education of the patient as to the nature of the disease, are responsible, I believe, for the disastrous complications of ulcer and the disability which this disease causes. Although peptic ulcer is an infrequent killer, it ranks high among the disabling diseases, partially disabling in most instances, but even in its mildest form detracting from the full capacity of the human being for work and the joy of living.

With the first occurrence of ulcer, just as with tuberculosis and diabetes, a patient should understand that the disease is by nature recurrent and capable of serious complications; he should also know that by developing an ulcer, he has put himself in a category from which he cannot escape as long as he lives. With that understanding, an intelligent patient is usually willing to use some self-discipline, particularly because he soon finds it rewarding in both immediate well-being and the improvement in general health which a so-called "ulcer life" invariably produces. This statement I make at the risk, I know, of being considered an irrepressible optimist. There is really no question, however, of the physically upbuilding value of the good ulcer life.

The question of hospitalization of the ulcer patient is subject to argument, and particularly so in these days of hospital-bed shortage. For us there is for the active ulcer no other truly satisfactory solution than hospital treatment, with the opportunities which it affords for rest and neutralization of acidity, two principles which are the keynote of good treatment, and for close observation and education of the patient. The time required is 3 weeks, 17 days of which are spent at complete bed rest. Food is gradually increased according to a Sippy schedule modified for the individual's requirements. Antacid medication, now usually one of the aluminum hydrate products, is used to a degree necessary for neutralization, and this is checked by gastric analysis for adequacy. Antispasm therapy, usually with belladonna and the application of heat, is used in all cases in which irritability of stomach or duodenum, or of small and large intestine, has been demonstrated, together with supplementary vitamin therapy, and in malnutrition cases supplementary protein in the form of amino acids. And of equal importance is the opportunity which hospitalization provides for the close coöperation of physician and patient in planning the life routine of the patient after hospital discharge, in revealing and helping to solve psychogenic deterrents to the success of treatment; and finally, in weaning the patient from smoking, to which so many ulcer patients are addicted. And here I would like to state that the healing and maintenance of healing of peptic ulcer are, in our experience, absolutely incompatible with the habit of smoking. We tell our patients unequivocally that smoking must be "out for life."

The treatment of ulcer complications should be briefly discussed. Hemorrhage, when of more than one occurrence, is a very serious complication. Strangely and as yet unexplainedly, there is an apparent tendency to hemorrhage in cases of patients who have had multiple hemorrhage, even from the new jejunal ulcer which may develop in cases resected for this complication. In our group of carefully followed cases 26 per cent have so far developed new jejunal ulcers which have the same tendency to hemorrhage which the original duodenal ulcer had; and, I might interpolate at this point, ulcer statistics tend to worsen rather than to improve as time goes on, the possibility of ulcer recurrence and complication ending only with the life of the patient. Although in general our policy has been to advise resection in cases of multiple hemorrhages on the theory that hemorrhage is prone to recur repeatedly, we believe now that whenever patients have not yet had completely adequate medical treatment in the past it is wise to use this conservative method of treatment first before surgery.

The immediate treatment of massive hemorrhage is, in our hands, likewise conservative. The bleeding ulcer is a very acute ulcer with an exposed blood vessel. Although the Meulengracht theory is that hunger contractions are best controlled by the early administration of food, we still believe that there is usually nausea rather than hunger shortly after a hemorrhage, and that 24 to 48 hours without food and later the gradual administration of very easily digestible liquids, such as malted milk and strained gruels, require less work on the part of the stomach, reduce the possibility of further massive hemorrhage, and promote healing. The usual supportive measures of intravenous fluids, transfusions, and narcotics are invaluable.

Obstruction as a complication of ulcer is never an acute emergency. Its true character can always be evaluated and the important differentiation made between obstruction due chiefly to inflammation and edema on the one hand, and on the other, to scar formation, the former being relievable with medical treatment and the latter requiring surgery. Dr. Wilkinson of our Clinic has planned a method of drainage by which the patient is alternately fed and drained via a nasal tube left in situ— fed on the hour with small quantities of malted milk, strained gruel with which alumina hydrate and an amino acid preparation are mixed. The tube is clamped for a half hour and unclamped for the next half hour. The quantities of intake and drainage are measured, and when drainage continues after 3 or 4 days to equal or exceed intake, we believe there is no relief of obstruction and such cases should be considered obstructive because of scar tissue; whereas, if intake gradually exceeds drainage, the case is relievable. This method seems to have value not only in distinguishing those cases immediately relievable, but in giving valuable prognosis for the future.

The complication of perforation requires only a few words of discussion. The acutely perforated ulcer is rarely missed in diagnosis and, of course, requires immediate surgery. Subacute and localized perforation is often not diagnosed. It may be suspected by increased pain and severe tenderness. It is often indicated by the combination of a deep and penetrating X-ray crater, over which there is marked tenderness, and it may respond to medical treatment.

The complication of carcinoma in gastric ulcer is a problem of great importance. The high incidence of cancer of the stomach challenges our best efforts to attain the earliest possible diagnosis. In addition to the lesions which begin as the infiltrating carcinoma, our experience leads us to believe that a lesion which has been an apparently benign ulcer, with healing and later recurrence, may become malignant. It is the belief of Shields Warren, our pathologist, and myself that with repeated healing and ulceration, the cells undergo changes which transform them into malignant cells, and that the condition is analogous to that which occurs in ulcerative colitis and endocervicitis. Translated into clinical precept, this means that although a single occurrence of gastric ulcer is innocuous if it heals completely, recurrences harbor the potential menance of malignancy. It is, therefore, our policy at present to be as certain as humanly possible by the clinical course, X-ray follow-ups and gastroscopy that every gastric ulcer on its first occurrence is completely healed, and secondly, that with any recurrence, resection should be done. This policy becomes embarrassing only when a recurrent gastric ulcer again heals before the patient can be hospitalized and operated on, a not too infrequent occurrence in these days of bed shortages.

Indications for surgery in peptic ulcer vary widely throughout the country and are entirely dependent on such circumstances as the coöperation of gastroenterologist and the surgeon, and the care with which follow-up observations are made. Changes in policy occur both on the conservative and radical side when there are both careful follow-ups and surgical medical coöperation. As I have already said, ulcer statistics grow worse rather than better as time goes on and ulcer patients live on.

Wherever both gastroenterologist and surgeon are privileged to appraise together both the good and the bad end-results of medical and surgical treatment of ulcer, initial enthusiasm for either method is often tempered by humility, and help is eagerly sought by one from the other. The surgeon is entirely willing to have the gastroenterologist treat the case until complete intractability is demonstrated, and the gastroenterologist is equally eager to have the surgeon take over when this becomes necessary. Now, when is an ulcer intractable? We consider it so, obviously, when there is acute perforation, when there is obstruction due to scar formation, and when there have been multiple hemorrhages in cases in which strict medical management has never been tried. Surgery is likewise indicated in the acute intractable hemorrhage, occasionally encountered in cases of calloused ulcer with an open blood vessel in its center. Wherever in the gastric ulcer, malignancy, present or potential, must be suspected because of failure to heal completely or because of recurrence, resection must be done unhesitatingly. It is our present opinion that in such cases the frequently received pathologic report of benign or even of healing ulcer must not deflect one from this policy. And finally, there is the ulcer which gives intractable pain, practically always due to erosion of the ulcer into the pancreas or the left lobe of the liver, and which has no base; this is unhealable under even the most meticulous medical management.

The intractable patient, on the other hand, is, in our opinion, not a promising candidate for surgery, i.e., unless vagotomy proves to be more successful than we dare to hope, or unless, as in some cases, by the ordeal of surgery the patient is sufficiently impressed to become tractable. Those who expect complete freedom from restrictions after surgery very often come to grief with a new and more serious jejunal ulcer.

The types of operation now commonly used are gastroenterostomy, gastric resection, and vagotomy, the latter combined with either gastroenterostomy or resection. I have already said that in our opinion results on vagotomy must be watched for 1 to 5 years before the true value of this operation can be appraised. Gastroenterostomy alone, in our hands, is reserved for the elderly patient with cicatricial obstruction, while high gastric resection is used as our routine procedure for the intractable ulcer. In 61 of our 77 cases in which vagotomy has been done it has been combined with resection, and we are at the moment engaged in appraising the relative value of resection with vagotomy as compared with resection alone.

As you see, the problem of peptic ulcer is still a very complex one. Its solution probably requires many more years of patient and analytical observations and the use of the best possible clinical judgment.

There are, however, a few precepts established for us by experience which merit emphasis:

1. The disease should be diagnosed as early as possible and the ulcer and patient both treated, the ulcer healed, and the patient educated to keep it healed.
2. No ulcer should be regarded as intractable until so proven by meticulously administered medical management.
3. The intractable patient should not be confused with the intractable ulcer, and every appeal should be made to the intelligence of the patient in managing the disease.
4. No short-cut method of treatment which involves an unphysiologic procedure should be used until all other methods have been tried.
5. The recurrent ulcer, if on the gastric side, must be regarded with suspicion of malignancy and resected.

AN APPRAISAL OF OPERATIONS FOR PEPTIC ULCER*

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IN 1881, just 65 years ago, Billroth described his technic of resection of the pylorus and in the same year Wolfer described the technic of gastroenterostomy, and the description of these two operations was the beginning of gastric surgery. In addition to these two names must be added Heineke, Milkulicz, Hoffmeister, Braun, Shoemeker, and Roux before the turn of the century and Polya, Balfour, Von Haberer, Finney, and Finsterer since 1900. All these brilliant men added their part to a new and very rapidly developing field of surgery, namely, gastric surgery.

The senior author's interest and personal experience in gastric surgery dates back about 30 years, and it is of interest to very briefly mention the high points in the progress of gastric surgery during this period.

In the 1920's the medical men and the surgeons were very much divided in their ideas of treatment. There was no such thing as the combined medico-surgical treatment as we know it today, and the treatment whether medical or surgical depended upon whether the internist or surgeon first saw the patient. The consequence was that the medical men treated the complications of peptic ulcer (which we all know now are surgical) in many cases without results, and the surgeons operated upon many patients who might have been cured by medical treatment and many of whom were made very much worse by operations. In fact, during this era many gastroenterostomies were done for symptoms alone, without any demonstrable pathology, and it was in these patients with small ulcers or none at all in whom gastroenterostomies were done that so many unfavorable sequelae followed. The poor results of the two separate methods were the big factors in bringing the medical and surgical men together in this problem, and after awhile the medical men began calling for help in their intractable cases and the surgeons began realizing that these patients needed medical care after operation. This was the first step in the progress of their problem. The second step was when the surgeons learned that the simple duodenal ulcer was a medical disease and that no surgery was indicated except for complications.

Gastroenterostomy was the operation of choice during this early period and was performed by Judd, the older Mayos, Balfour, and Deaver. A smaller group headed by Finney favored some type of pyloroplasty with or without excision of the ulcer. The most serious sequelae following gastroenterostomy was the formation of a gastrojejunal ulcer, and it was soon found that only about 75 to 80 per cent of the patients were free of symptoms following gastroenterostomy and only a slightly larger per cent following pyloroplasty. The incidence of marginal ulcers was from 3 to 30 per cent, as reported in various clinics.

Partial gastric resection was first done extensively in the European clinics and first in this country by the surgeons in New York, headed by Berg of Mt. Sinai Hospital. At first the arguments between the "gastroenterostomists" and the "resectionists" were heated, with the medical men on the sidelines adding fire to the argument, but it soon became apparent to everyone interested in this subject that the results following partial gastric resections were better than those following gastroenterostomy and the pendulum slowly but surely swung from the gastroenterostomy to the resection as the operation of choice.

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These in brief are the highlights of an interesting surgical development and bring us up to a discussion of the surgical treatment of peptic ulcer as we know it today. As one looks back over this development it is obvious that many of our ideas of physiology of the stomach as we know them today were the dominating factors in this change of surgical treatment.

In discussing peptic ulcer (which to the writers is a confusing term) we must make a sharp distinction between duodenal and gastric ulcers. These two conditions are different in etiology, curability, sequelae, and in fact in every phase of discussion. It would seem that to designate the ulcer as either gastric or duodenal rather than peptic, which might mean either, leads to less confusion in our discussion, and it is our purpose to first discuss duodenal ulcer and then gastric ulcer.

Although we do not know the etiology of duodenal ulcer, we know quite a bit about the disease, which helps us in our treatment. For instance we know that duodenal ulcer occurs in the high-strung nervous type of individual, that it occurs in young people, men more often than women, that the symptoms are remittent and aggravated by nervous tension, that there is an accompanying hyperacidity and gastric hypersecretion, and that there is a tendency to hemorrhage, to perforation, and to obstruction. We know that the ulcer on the anterior wall of the duodenum is more amenable to medical treatment but also may perforate, whereas the ulcer on the posterior wall of the duodenum is more difficult to heal medically and is more apt to bleed because of the anatomic position of the ulcer on the head of the pancreas. We also know that these ulcers, either on the anterior or on the posterior wall of the duodenum, may produce obstruction, part of which is due to spasm and part of which is due to inflammation and scar tissue.

Indications for Surgery

At the present time we are sure that both the surgeons and the internists are agreed that the indications for surgery are very definite and are (1) perforation, (2) persistent or repeated massive hemorrhage, (3) obstruction, and (4) intractability.

Perforation of a duodenal ulcer is a surgical emergency in which the time element between the perforation and the operation is the important deciding factor, and if these patients are operated upon in the first 6 to 10 hours the mortality should be exceedingly low. Careful anesthesia, simple suturing of the perforation, and the treatment of the accompanying peritonitis with transfusions and antibiotic and chemotherapy are all factors in keeping down the mortality. Although the clinical picture of a frankly perforated ulcer is very definite, it is surprising how many times the diagnosis is not made by the general practitioner, who many times is the first to see the patient.

Although massive hemorrhage is mentioned as a definite indication for surgery, still there is considerable debate as to what constitutes a massive hemorrhage and just when the surgery should be done. Our view of this problem is that any patient over forty who has had a massive hemorrhage and in whom an ulcer can be demonstrated by roentgenologic examination should be operated upon. The operation should be delayed only long enough to restore the patient's blood and chemistry to within normal limits. We do not believe that emergency surgery is indicated at the time of the massive hemorrhage but that a short period of preoperative preparation is safe and very much worth while. Just how long this period of preoperative treatment should be varies with the individual case, but it certainly should be long enough to restore the hemoglobin content of the blood and the protein deficiency which is apt to be present. With our facilities of transfusions and protein therapy this can be done quite rapidly. There is no set criterion as to the hemoglobin content of the blood, but 70 per cent is preferred. It is the opinion of some men that a longer period of waiting is worth while, and their argument is that a second massive hemorrhage seldom follows soon after the first one and that the patient is a better surgical risk if he is allowed a longer period of eating and getting about before the operation. If this period is prolonged certainly the patient should be on a restricted diet and be under careful observation. When operation is done these patients need a subtotal gastric resection to cure them.

Pyloric obstruction due to duodenal ulcer is considered a definite indication for surgery except in the acute cases with marked pylorospasm, which may subside under medical treatment. If the obstruction is due to scarring then there is not much improvement on the medical regimen and surgery is indicated.

The old scarred ulcer with reduced acid in the stomach in the aged is the one condition in which gastroenterostomy is indicated, but even in this condition, some authorities believe a resection is indicated. It is surprising how well the aged stand gastric surgery, and with careful preparation resection is quite safe. The size of these chronically dilated stomachs sometimes is enormous, and a period of preoperative gastric drainage will reduce them and make the operation much safer.

Intractability in the medical treatment of a duodenal ulcer is a very variable term and the two variants are first the patient and second the physician. Some patients stand a great deal more discomfort than others and particularly so when they are trying to avoid an operation. Some physicians likewise may encourage their patients to put up with the marked discomfort of an ulcer much longer than others. Perhaps the remark often made by Dr. W. J. Mayo that his patients had 9 medical cures before coming to surgery was pretty good treatment after all.

Certainly the patient in the intractable group before coming to surgery should be on a careful and well regulated course of treatment during which time the ulcer itself should be watched by repeated X-ray examinations. If the symptoms subside, if there is no hemorrhage, and if there is improvement on X-ray examination, then the ulcer is not intractable. Many times the patient is referred to surgery before a thorough trial of conservative treatment has been given because of either the patient or the physician. Certainly there is no more trying patient than the man with a constant pain in his stomach, who quite often is not allowed to do the things he wants to do most, namely, eat indiscreetly, smoke, and drink alcoholic beverages, and pretty soon this type of patient tries to make his own decision as to operation and decides that his ulcer is intractable. It is in this intractable group that the best results are obtained in the group or clinic where there is very close coöperation among the internist, the surgeon, the roentgenologist and the laboratory man.

Often the patient's symptoms disappear on medical management, only to reappear again in a very short time, and this recurring type certainly is the intractable type and should be referred for surgery. It is in this questionably intractable group that we believe vagotomy is definitely indicated.

As regards the indications for surgery in gastric ulcer, we believe that any patient with a gastric ulcer should be operated upon without delay. This belief is concurred in by most of the surgeons and gastroenterologists. There is a smaller group who believe that a period of careful study and treatment is safe during which time the symptoms must disappear, the blood must disappear from the stool, and the ulcer must heal as demonstrated on X-ray and gastroscopic examination. If the ulcer does not heal or if it recurs surgery is advised. The reason for advising surgery immediately in the gastric ulcer of course is due to danger of malignancy in the ulcer. The relation of gastric ulcer and cancer is a very much debated question among the pathologists, but there is no question from a clinical standpoint that gastric cancer is found in gastric ulcer. Whether the gastric cancer starts as such or is secondary to the ulcer is the debatable question.

The surgical treatment accomplishes several things in duodenal ulcer:

1. It reduces the acid in the stomach. At the present time we believe that subtotal gastrectomy reduces the acidity more than any other surgical procedure. In fact, we feel quite sure that the criterion for a successful subtotal gastrectomy is an acidity pretty much approaching the anacidity mark. Neither the gastroenterostomy nor the pyloroplasty were successful, because they did not reduce the acidity sufficiently.

2. It relieves obstruction. Any form of gastric resection will relieve the obstruction present, and a gastroenterostomy will do the same thing. We believe that there are so many other factors involved besides the obstruction that we should not think of any operation with the idea of relieving the obstruction alone, except perhaps in the aged person with an old scarred ulcer producing obstruction of the pylorus with markedly decreased acid. It is in this type of patient, as said before, that a gastroenterostomy is perhaps the operation to be considered.

At the present time we believe that a subtotal gastrectomy is the operation of choice when the patient comes for operation for any of the above indications.

Although we believe that a high subtotal gastric resection is the operation of choice in duodenal ulcer, it is shown in a review of our last 100 stomach operations that gastric resections were done only in 83 per cent and that other procedures which were done consisted of gastroenterostomy, pyloroplasty with excision of the ulcer, simple closure of the ulcer (only in acutely perforated ulcers), and vagotomy. We make this point to show that each operative case is an individual problem and that one should never try to fit a favored operation to all patients.

Recently the resection of the right and left vagus nerves is receiving our attention as a means of reducing acidity, and it is quite possible that this may be a very important step in the right direction. Technically the operation consists of a wide excision of the vagus nerves as they come downward over the lower esophagus. This can be done either by subdiaphragmatic or transthoracic approach. It is necessary to make a wide division of the nerves and to bury the proximal ends with the idea of preventing the regeneration of the divided nerve ends. Whether or not this regeneration is possible to prevent remains to be seen, since it is well known that sympathetic nerve chains have a tendency to regenerate again after being severed.

The rationale of vagotomy is in brief that duodenal ulcer is a psychosomatic disease and that there is a large neurogenic factor in it. This factor manifests itself by an overproduction of acid in the empty stomach and by a hypermotility of the stomach. Both of these factors can be controlled by vagotomy and the patient given relief from his symptoms. Duodenal ulcers and particularly marginal jejunal ulcers heal rapidly after a vagotomy. The operation is too new for us to know anything about the permanent nature of the cures and the permanency of the healing of the ulcers.

It has been shown that the secretion of the fasting stomach in the patient with duodenal ulcer, particularly at night, is excessive and that this excessive secretion returns to normal after vagotomy.

There have been some cases of prolonged atony of the stomach noted after the vagotomy, some so serious as to require operative procedures to correct them. In view of this atony postoperative drainage of the stomach for a few days following the vagotomy is imperative. Gastroenterostomy or pyloroplasty should be done with vagotomy to facilitate emptying.

At the present time it would seem that the operation of vagotomy is too new to fairly appraise it, but certainly it is founded on a good physiologic basis and should be given a place in the surgical treatment of the duodenal ulcer. Certainly it is opening up entirely new avenues of approach both in the treatment and in the study of these patients with duodenal ulcer.

From the work done it appears that the mildly intractable ulcer with high acid and no obstruction and the recurrent marginal ulcer are the two most favorable types of conditions which respond well to vagotomy.

The operation is easy to perform and there should be a low morbidity and mortality rate when the operation is properly done.

Surgical Technic

At the present time we are giving a great deal of attention to our preoperative preparation of the patient on whom gastric surgery is to be done. This preoperative treatment can be divided into three main categories:

1. Correction of chemical and water balance. Under this heading is the correction of any anemia by transfusions and of protein deficiency by one of the protein preparations given intravenously. A high carbohydrate diet by mouth if tolerated or dextrose given intravenously if not tolerated by mouth is essential.

2. Chemotherapy. Recently we have been giving our patients penicillin, starting either immediately before or after the operation with a fairly large dose every 3 hours and continuing for 72 hours, then doses every 4 hours during the day or penicillin in beeswax as a single daily dose if indicated. We do not give a prolonged preoperative treatment because we are not dealing with an infection but only a potential one and injections every 3 hours before operation tend to upset the patient's preoperative rest. Sulfanilamide crystals were used in the upper abdomen, and intravenous sodium sulfathiazole or sodium sulfadiazine was used prophylactically before penicillin but has since been discontinued.

3. Decompression and irrigation of the stomach. This is only necessary in the obstructed stomach, but if there is a dilatation we feel that several days of constant gastric lavage through an indwelling catheter is indicated and very much worth while. If there is an anacidity present the stomach is irrigated with a weak solution of hydrochloric acid the night before the operation.

The anesthetic of choice is some form of continuous spinal anesthesia, and our preference at the present time is for the indwelling catheter rather than the indwelling needle. The advantages of the catheter method is that the tip of the catheter can be placed quite high in the spinal canal which results in rapid anesthesia with the minimum amount of the anesthetic agent. The other advantages are that it is not so cumbersome, since no special mattress is necessary and that theoretically the catheter is not as irritating as the tip of the needle. Any type of spinal anesthesia is supplemented with pentothal sodium given intravenously. It should be emphasized that a well given anesthetic in gastric surgery is most important, and any form of spinal anesthesia and particularly the continuous type should be given only by a trained anesthetist. In our series of cases we have been most fortunate in that the anesthetics have all been given by trained men. Recently a few of the resections have been done under general anesthesia with curare and this method has been quite satisfactory.

Rectus incisions either right or left, depending upon the location of the ulcer, are used. The transverse or subcostal incisions have some advantages, but high exposure in the upper abdomen is difficult to get with a transverse or subcostal incision. Careful attention is given to closing the incision, since there is always present the danger of wound dehiscence. Nonabsorbable interrupted cotton sutures are used throughout. The wounds are dry and drainage is not used.

It is not the purpose of this paper to go into the details of the surgical technic of the various operations, and in this connection we only want to say that at the present time our operation of choice for a duodenal ulcer is a subtotal gastrectomy with removal of the duodenum containing the ulcer together with at least three fourths of the stomach. The blind end of the duodenum is closed, and the continuity of the gastrointestinal tract is restored by a Hofmeister type of anastomosis between the cut end of the stomach and the jejunum made antecolically. No entero-anastomosis between the two legs of the jejunum is made. The advantage of the antecolic anastomosis over the retrocolic type is that technically it is easier, and if there is a recurrent marginal ulcer the new ulcer is anterior to the colon and there is not apt to be a gastrocolic fistula. Also the stomach does not empty so rapidly after the Hofmeister anastomosis. Some believe the incidence of marginal ulcers is increased in the antecolic type of anastomosis, the reason for this being that the stomach contents enter the jejunum lower down than in the retrocolic type.

In some cases the duodenal ulcer encroaches upon the common duct and the ampulla of Vater so much that a safe closure of the duodenum cannot be made, and in this type of case the exclusion operation of Finsterer with complete excision of the pyloric mucosa is done. This operation consists of dividing the prepyloric section of the stomach, excising the mucosa of the pyloric stump down to the pyloric ring, closing the end of the stomach, and then completing the high gastric resection.

All of our mortality has been due to perforation of the duodenal stump, and in our cases this perforation has occurred in the patients in whom a good closure of the duodenum was not obtained due to encroachment on the common duct. Others report the same difficulties, and numerous methods of handling this closure of the duodenum and still preserving the continuity of the common duct have been described, but it is our opinion that the exclusion operation is the operation of choice when there is any question as to the safe closure of the duodenal stump.

Our resection for gastric ulcer or carcinoma technically is about the same except that in the presence of carcinoma we remove the omentum and the spleen as well if a high gastric resection is done.

The patient is given a transfusion of 500 c.c. of blood during the operation and of 250 c.c. daily for the first several days. A total of 3,000 c.c. of fluid daily is about the average given intravenously. This includes the blood, the protein preparation, and the remainder in the form of 5 per cent glucose.

Our patients have an indwelling catheter (nasal) in the stomach at the time of operation and this is kept in for the first 48 hours and then removed and only reinserted if the patient vomits or remains nauseated, which seldom occurs. The tube is kept open but not attached to suction unless vomiting ensues.

Water by mouth is given sparingly for the first 48 hours while the tube is in place, and after the tube is removed hot liquids are given in small measured amounts together with measured amounts of water. These feedings are increased, and on the seventh day semi-soft food in small amounts is given. After this the diet is increased rather rapidly.

Vitamins are given in the form of injectable B complex and C. Vitamin K is given if indicated. After the tenth day the patients are given multivitamin capsules orally together with liver-iron medication as indicated and tolerated.

The patient is encouraged to move about in bed and to breathe deeply, is out of bed on the fifth to seventh day, and is able to leave the hospital in about 10 days following the operation. At this stage in the postoperative course the patient is on a soft diet, with feedings between meals, which is increased rapidly under the direction of the medical gastroenterologist.

With the idea of bringing out some important facts in this problem we have gone over our last 100 cases of all types of gastric surgery. These cases can be divided into four main types: duodenal ulcer, gastric ulcer, marginal ulcer and malignant lesions. The duodenal ulcer group includes acute perforation and totaled 53 per cent, the benign gastric group totaled 16 per cent, the marginal ulcer 10 per cent, and malignant lesions 21 per cent. We are far more satisfied with our methods of handling the benign group than we are the malignant lesions, which are still very discouraging. Our mortality has steadily been decreasing due to the proper selection of cases, the increased attention to pre- and postoperative management, the coöperation of the internist, and the standardization and improvement in operative technic, materials and anesthesia. We have had no deaths in gastric resections since the last of 1944, during which year we had 1. The over-all mortality for all types of cases was 9 per cent, of which 6 per cent were cancers, 2 per cent duodenal, and 1 per cent gastric ulcer. There was no death in the marginal ulcer group, all of which had resections. The mortality percentages per year were as follows in all types of gastric surgery:

Up to 1942	12 per cent
For 1943	8 per cent
For 1944	5 per cent
For 1945	4 per cent
For 1946	0 per cent (10 months to date of this paper)

The operations include partial, subtotal and total gastrectomies, transthoracic resection of the stomach and lower esophagus, vagotomy, pyloroplasty, excision of ulcer, anterior and posterior gastroenterostomy, exclusion operation, resection of the spleen and omentum with gastrectomy for cancer, simple closure of acute perforation, and resection of stomach and jejunum for marginal ulcer. The operation of choice in our series was the gastric resection with the Hofmeister antecolic anastomosis and is the routine used for both duodenal and gastric ulcers.

The postoperative temperature courses were very interesting in demonstrating the improvement year by year since the advent of the sulfonamides and penicillin used prophylactically. From 1942 to the present the figures are as follows:

MAXIMUM TEMPERATURE F.		DEGREES ELEVATION F.	DAYS TO NORMAL
1942	102	3.3	7
1943	101.8	3.1	6.7
1944	101.5	2.9	6
1945	101.3	2.7	4.7
1946	100.4	1.8	3.8

These figures are of course averages and show the greatest improvement from 1944 with sulfonamides and then 1945 and 1946 with penicillin.

There have been several cases of combinations of ulcers, namely, simultaneous benign duodenal and gastric ulcers, the rather frequent anterior and posterior duodenal ulcers, benign duodenal ulcer with carcinomatous gastric ulcer, and benign gastric ulcer with adjacent lymphosarcoma. Another finding is the almost constant chronically infected appendix. Still another finding is the almost constant adhesions between an apparently normal gallbladder and a duodenal ulcer, the combination giving a very confusing clinical picture which quite often is diagnosed as gallbladder disease. The usual cholecystogram shows a poorly functioning gallbladder, which condition usually is relieved after the ulcer is removed.

In presenting the individual types of ulcer, we first consider the duodenal. There were 2 deaths, both of which were attributed to duodenal perforations. The ages varied from 20 to 77, average 48.5. The duration of symptoms varied from 3 weeks to 30 years, average 9.1. The hemoglobin of the non-bleeding cases was 29 to 90 per cent, averaging 62 per cent. The symptoms were listed as follows: 87 per cent had pain as their outstanding symptom, usually hunger type pain; 39 per cent had nausea and vomiting; and 36 per cent had hemorrhage at one time or another. The operative findings disclosed the greatest number to have pyloric obstruction; second, a non-perforating ulcer without obstruction; third, the posterior chronically perforating ulcer into the head of the pancreas; fourth, the acute hemorrhage; and fifth, the acute perforation. There were 6 cases in the series which previously had an acute perforation and operation.

The second type is the gastric ulcer, in which there was 1 death, the patient dying of uremia on the nineteenth postoperative day following a gastroenterostomy, his condition not warranting resection. The ages varied from 35 to 63, averaging 55. The duration of symptoms varied from 3 weeks to 15 years, averaging 7. The hemoglobin varied from 25 to 83 per cent, averaging 66 per cent. The outstanding symptom was pain after eating; nausea and vomiting were present in 50 per cent of the cases; a few had only weakness and loss of weight with vague "indigestion." In only 2 of the cases was there hemorrhage.

Marginal ulcers included 10 cases. There were no deaths. The ages varied from 39 to 67, averaging 44. The years after gastroenterostomy varied from 3 to 27, averaging 13. The predominating symptom was again pain in 80 per cent, with hemorrhage second with 20 per cent. There was occasional nausea and vomiting. The hemoglobin varied from 65 to 97 per cent, averaging 78 per cent.

The 21 malignant lesions included carcinoma, lymphosarcoma and squamous cell-epithelioma of the esophagus. There were 6 deaths, 28 per cent, 1 from pulmonary embolism, 1 from peritonitis, 1 from cardiac failure, 2 from pneumonia, and 1 from a combination of empyema, hepatitis and cardiorenal disease. The outstanding symptom was loss of weight, followed by nausea and vomiting, and then pain and weakness. Two patients had hemorrhage. All had so-called indigestion. The duration of symptoms was from 3 months to 10 years, the critical time being 6 to 7 months. The ages varied from 37 to 77 years, averaging 62. The hemoglobin varied from 9 to 100 per cent, averaging 63, and the anemia was directly proportional to the duration of the symptoms.

The postoperative course of the patients has been increasingly less severe. At one time it was not unusual to have a patient after resection complain of fullness to the point of vomiting for 7 to 10 days after operation due to edema at the anastomosis. We have not seen this for almost a year. We had occasion to visualize a duodenal stump 1 year after an exclusion operation, and the unresectable ulcer had completely healed. Only 1 other patient had to be operated on again, and this was for midjejunal adhesions with partial obstruction. This was the only case in which an enteroanastomosis was done.

The carcinoma patients present a much less cheerful picture. A large percentage of the patients resume their symptoms about 9 months after operation and go on to their termination. Of our 21 patients operated upon for malignant disease of the stomach and esophagus 9 are alive and well, 43 per cent.

In the follow-up in the duodenal ulcer cases it is obvious that there are great improvements in the condition of the patients following the operative procedures. We wish to emphasize again the benefit derived from the coöperation of the internist and the surgeon in the selection and management of cases, and this brings up a point which is to be thoroughly worked out in gastric resections. The frequent occurrence of dizziness, faintness and failure to gain weight are mentioned as postoperative symptoms. The surgeon firmly believes that a large portion of the stomach should be removed in the benign ulcer cases in order to reduce the acidity and prevent the formation of a marginal ulcer. The internist who follows the case sometimes believes that too much of the stomach has been removed to enable the patient to maintain proper nutrition and dietary comfort. So it is again obvious that the goal is not reached. Perhaps a less drastic resection with a vagotomy will be the answer.

We have not attempted any follow-up on our cases in this report and are making no attempt to

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CULPABILITY FOR THE DELAY IN THE MANAGEMENT OF CANCER

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NO CONSCIENTIOUS physician can feel satisfied with the management of cancer today. The methods of treatment most successful at present, surgery, radium, and roentgen therapy, depend a great deal for success upon the early institution of treatment of the disease. The methods can succeed only when they can completely destroy all of the disease; but even if successful they may leave the patient badly mutilated.

Until better methods of treatment are developed any increase in the cure rate of cancer must depend on earlier recognition of the disease and speedier passage of the patient through diagnostic to therapeutic channels. If our present knowledge alone were utilized to its fullest extent, we could double our number of cancer cures immediately.

In 1938 Pack and Gallo[1] surveyed 1,000 cases of cancer in New York City and determined where any culpability for the delay in the diagnosis lay, with the patient, the physician, or both, and to what extent. Again in 1946 Leach and Robbins[2] made a survey of 500 cases of cancer in the same city, largely from the same hospital, and under similar conditions as to the previous series. The results of these studies show that in 70.6 per cent[2] to 79.3 per cent[1] of the cases there had been excessive delay in their handling.

It seemed of interest to investigate the delay and culpability for delay in the diagnosis and management of cancer in our own community at a time when the medical profession has, to a large extent, become readjusted after the recent War.

SOURCE OF CLINICAL MATERIAL

The cases presented were obtained from records of or interviews at the Warwick Memorial Clinic during the period of 1946–1948. Most of these cases were admitted during the year 1947, with a few in 1946, and the first 2 months of 1948. A few cases from the Garfield Memorial Hospital are included. With very few exceptions these patients were all referred to the Clinic by physicians practicing within a radius of 25 miles of the District of Columbia.

Although no statistical analysis has ever been made of the financial status of the patients attending this Clinic it is estimated that 10 per cent of them pay for their care in full, 60 per cent pay for a portion of their care, and 30 per cent are cared for on a free basis.

METHOD OF STUDY

The method of study was relatively simple. All cases of cancer admitted to the Clinic were surveyed. Only cases confirmed by biopsy were included in this report. This included a few cases treated in one of the departments of Garfield Memorial Hospital by a member of the Warwick Clinic staff. The data were obtained by either the admitting physician or the author. The patient was unaware that any but routine questions were being asked. Actually the questions were no different from those asked in any complete physical examination. The questions were as follows:

1. What was the first thing you noticed?
2. When did you notice it?

3. What did you think it was?
4. What did you do about it?
5. When did you do it?
6. When did you first consult a physician or seek medical care?
7. To whom did you go (physician, radiologist, chiropractor, surgeon, etc.)?
8. What did he do about it?
9. When did he do it?
10. Was a piece of tissue removed for examination? When?
11. What did he advise?
12. Did you follow that advice?
13. Of what did the treatment consist?
14. When was treatment started?
15. By whom was treatment started?

Four hundred and twenty cases are included in this study. The data obtained were abstracted on special forms for recording and analysis. An effort was made to analyze the cases along the same lines as outlined in the studies of Pack and Gallo[1] and Leach and Robbins[2] in order to facilitate comparison. However, this study differs in that only cases microscopically diagnosed as cancer are included. No purely clinical diagnoses were accepted.

The ground rules were similar to the other studies. These were:

1. The patient was considered at fault if (a) he delayed 3 months or more after the first symptoms before he consulted a physician, or (b) he refused to follow competent advice or referral to a qualified physician, hospital, or clinic.

2. The physician was considered culpable if (a) he failed to arrive at a diagnosis within a month or, (b) if he did not refer the patient to a suitable hospital or clinic where an honest effort would be made to establish a diagnosis. (This detail differs from the previous studies mentioned in that the physician was considered to have delayed over 1 month if the diagnosis was not established by either the original physician or the clinic or hospital of referral within 1 month).

3. Where a combination of the above factors was present, the patient and the physician were considered jointly responsible for the delay.

It is appreciated that the data given in this study derived from the patient alone are conceivably biased. However, since the patients' statements agree remarkably well with data contained in all letters from referring physicians, hospitals, or clinics which either accompanied the patients or were obtained later, it is believed that the statements given by the patients are as accurate as the human memory for dates and events will permit.

COMPARISON AND RESULTS

The purpose of breaking down the data into various groups and the comparison with the previous studies noted was to show the relationship of the patient, the physician, and the combined delay in cancer diagnosis in this city and to compare it with New York City.

The data for over-all delay and culpability are shown in the accompanying table (table 1).

TABLE 1

Responsibility for Delay in Various Studies

GROUP	1936 PACK & GALLO PERCENT	1946 LEACH & ROBBINS PERCENT	1947 PRESENT STUDY PERCENT
PATIENT ALONE	44.3	32.0	37.9
PATIENT AND PHYSICIAN	18.0	10 8	5.9
PHYSICIAN ALONE	17.0	27 8	18.8
NO DELAY	20.7	29 4	37 4

It is noted that the percentage of cases in which there was no delay by either the physician or patient is greater in this study than in the New York City studies. The delay on the part of the physician in this study (18.8 per cent) approximates that of Pack and Gallo[1] (17 per cent). The delay on the part of the patient alone in this study (37.7 per cent) represents average between the figures of the two studies from New York City. The delay due to both physician's and patient's fault is less in the District of Columbia than in New York City.

Many patients with complaints are incompletely examined by physicians. Among these are many cases of cancer which might be detected earlier by a more thorough study of the patient. The small, painless and seemingly inconsequential lesions of the face are often neglected until the pressure of social influence forces the patient to seek further medical care. Breast lesions or vaginal complaints are apt to be tolerated because of self-consciousness. In order to evaluate these factors in delay and culpability, cases were classified into 4 groups:

1. *Superficial.* This consisted of those cancers that could be detected or suspected by a superficial examination, e.g., skin, lip, anterior tongue and the like.
2. *Breast.* Self-explanatory.
3. *Thorough.* Those cases that might be detected or suspected by a thorough history and physical examination, e.g., cancer of the floor of the mouth, posterior two thirds of the tongue, pharynx, gynecologic tract, the distal rectum, anus, and prostate, and accessible lymph nodes.
4. *Special.* This consisted of those cancers that could be suspected or detected by a complete and thorough history and physical examination plus some special examination, such as endoscopy, fluoroscopy, etc., e.g., cancers of esophagus, stomach, upper rectum, colon, kidney, bladder and lung.

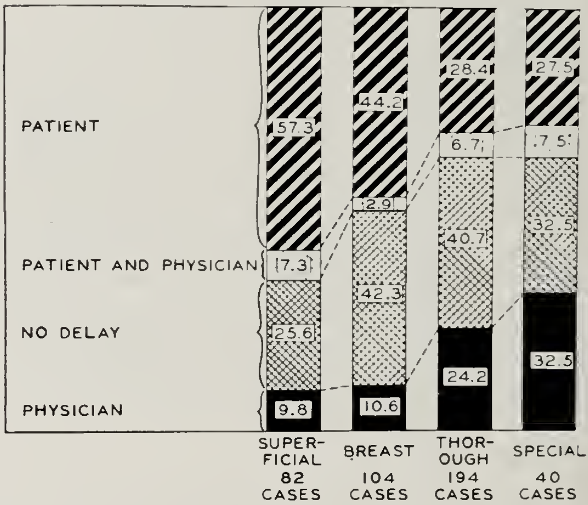
The 420 cases were divided into 82 cases in the superficial group, 104 cases in the breast group, 194 cases in the thorough group, and 40 cases in the special group. The delay from physician, patient, or combined fault is shown in chart 1.

This analysis reveals the following facts: (1) The physician's ability to make a prompt diagnosis is inversely related to the concealment of the disease. In short, as a more complete examination than is usually given is required to diagnose or suspect the disease he is more apt to overlook the disease. (2) The patient's delay is inversely related to the possible severity of the symptoms. (3) Both physician and patient delay is least in breast cancer. (4) The patient delay is highest (57 per cent) in the superficial group. (5) The seemingly benign superficial lesions are painless and usually treated by household or patent medicine remedies before the patient seeks medical advice.

The data were then analyzed in terms of delay in months from first symptoms to first medical care and first medical care to treatment. It was not possible to use all of the cases in the study for this analysis. Some of the patients who went elsewhere for the treatment and those who noted the onset of their lesions or symptoms as an indefinite number of years prior to seeking medical care were omitted. The analysis was made in groups as described previously. The number of cases used in this series is, admittedly, too small to be significant because the time ranges are too great, but they illustrate the trends. This is shown in chart 2.

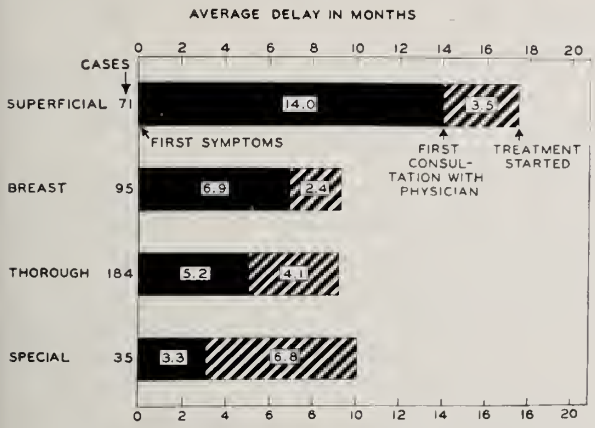
CHART 1

RESPONSIBILITY FOR DELAY IN DIAGNOSIS



The data were also broken down into an analysis of the delay between diagnosis and the onset of treatment. In this analysis, if the treatment was instituted within 1 week after a diagnosis had been reached there was considered to have been no delay. Some of the patients elected to go elsewhere for treatment after the diagnosis had been made, and in these cases it is unknown when treatment was instituted and they are so classified. Of the total 420 cases, 228 (54.3 per cent) had no delay in the institution of therapy after diagnosis, in 138 (32.9 per cent) the delay was less than 1 month, and in 37 (8.8 per cent) the delay was more than 1 month. This is shown in chart 3.

CHART 2



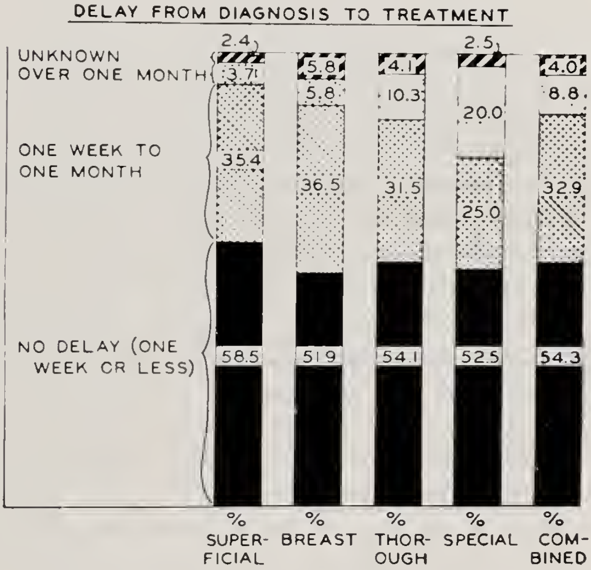
Discussion

These data are not submitted to draw criticism to either the medical profession's or the patient's role in the campaign against cancer. Errors in judgment are made by all physicians and patients because both are human. Physicians in general are rugged individualists and as such often stubbornly follow through with a given form of treatment over a prolonged period of time if subjective improvement has been noted. Patients are inclined to take advice from neighbors or relatives who will have seen somewhat similar lesions or have heard of similar complaints improved by some household remedy. Scheele[3] has estimated that 20 per cent of the males and 22 per cent of the females in this country will have cancer some time during their lives. How many of these will die of cancer will depend largely upon how early approved therapy is instituted unless a real panacea of cure is discovered in the future.

The only proven curative methods of treatment of cancer today are surgery and/or radiation therapy, either separately or combined. These methods are most successful only when the disease is early and still localized. Disfigurement and disablement often result from the treatment of early cases, but are more pronounced when there is a delay in diagnosis and treatment.

Because of the justifiable differences of opinion among physicians as to which method of treatment is best for an individual cancer no attempt was made to define acceptable treatment for each lesion. In general, "treatment begun" was measured from the time when physician, hospital, or clinic instituted one of the usually acceptable methods of treatment of cancer. On many occasions treatment was begun on the basis of a clinical diagnosis before the microscopic diagnosis was confirmed. This procedure decreased the delay between the onset of symptoms and the institution of therapy.

CHART 3



The weakest links in the chain of present cancer control are the lack of realization of importance of cancer detection work and the delay in the diagnosis and treatment. The following typical case is illustrative of the medical delay (all hospitals noted are within the District of Columbia):

B. H., colored, female, went to the outpatient department of Hospital A about September 6, 1947 with the complaint of abnormal vaginal bleeding. She was examined and referred to Hospital B. At Hospital B she was examined on September 21, 1947 and a biopsy of the cervix was taken at that time. The patient was then referred to Hospital C, and a letter was written on November 4, 1947 to Hospital C stating that the biopsy diagnosis was carcinoma of the cervix. She was further examined and tested until December 6, 1947, when roentgen therapy was finally instituted—a delay of 3 months under competent medical care.

Todd[4] has stated that in cases of uterine cancer presenting vaginal bleeding the rate of curability decreases 3.34 per cent for each week or approximately 15 per cent per month of the duration of the bleeding. For other cancers there is probably a similar decrease of curability related to the duration of certain symptoms.

The old saying that "if it doesn't bother you, don't bother it" has certainly been disproven in relation to tumors; yet patients in this series have stated many times that they received this very advice with regard to the cancer which finally brought them to the Warwick Clinic.

Various programs of cancer research, service, and education sponsored by both governmental and private agencies have been outlined in both medical literature and lay articles. The programs will not be discussed here except to say that each of these is doing much to educate the public and the profession to the high incidence of cancer regardless of age, sex or color.

The ideal case, for example, a carcinoma of the lip, should be biopsied on the date of admission to the clinic. The biopsy report should be returned to the chart within 48 hours. The patient should receive initial treatment within 72 hours of admission without undue effort. This, admittedly, is the ideal and not the usual. In this study 1 week was considered an excusable delay between establishment of a clinical diagnosis and the beginning of treatment. In 228 cases (54.3 per cent) there was no inexcusable delay.

The causes for delay between diagnosis and treatment in these cases are as follows:

1. Delay by the institution's ruling not to accept the pathologic interpretation of the biopsy obtained at another institution.
2. Delay by the pathology department within its own organization in arriving at a diagnosis.
3. Delay of specimens and reports in interdepartmental transit.
4. Delay between clinic appointments and consultations because certain clinics are held only at weekly intervals.
5. Delay because general physical condition of the patient would not safely permit immediate institution of treatment.
6. Delay in obtaining a hospital bed or operating room time for indicated surgical treatment.
7. Delay by patient in accepting therapy advised.

It was gratifying to note that in none of our cases was the delay in either diagnosis or treatment of the disease due to lack of funds.

The average medical school curriculum has been studied[5] and found to be woefully weak in instruction with regard to the detection of cancer. Recently funds have been made available by the United States Public Health Service to help remedy this weakness, and many of the medical schools are already taking advantage of this opportunity.

The best hopes for shortening delay in diagnosis of cancer lie with the physician himself. Osler is supposed to have said that syphilis could mimic any disease. He might well have said the same of cancer. All physicians should keep it in mind when examining each and every patient. Only by always looking for cancer will the culpability of the physician for delay in this disease be erased. Both general practitioner and specialist are equally responsible. It should be the privileged duty of every physician in every case to complete his own cancer detection examination as promptly as possible almost regardless of presenting symptoms, and where cancer is suspected to carry through with the necessary procedures or make suitable disposition without delay. It is the duty of the initial

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President's Page

IN CONCLUSION

This year has been a good one for me and, I feel, for the Society. I have enjoyed my term as President tremendously. Like my predecessors, I have gotten to know many of our members with whom I was previously unacquainted. This in itself has been a great privilege. It has also been my good fortune to see several of the Society's projects successfully launched and in some instances completed.

Generally speaking, there has been widespread interest among members in Society affairs. This has been demonstrated in many ways most heartening to me. However, let me hasten to add, it has not been demonstrated by attendance at business meetings, except when a controversial matter was under discussion.

No President of the Society could successfully fill his office without the wholehearted support of the membership. I feel that, by and large, I have had that kind of support, and I wish to take this opportunity to thank everyone for their many kindnesses and for the loyal support they have given me.

The honor of being President is one which I shall long cherish.

Raymond J. Holden

Editorials

NATIONAL HEALTH ASSEMBLY

Representatives of medical organizations who attended the National Health Assembly held in Washington, May 1 to 4, 1948, were by no means in agreement as to the significance of its proceedings. One critic described it as a "cruel hoax," affording a "willful little group engaged in nationalizing medicine" an opportunity to advance their cause. However, a majority took a different view. Typical of their comments were the following: "Not a cynical note"; "the first such occasion where physicians and laymen worked together so zealously to develop a health program"; and "established what is apparently a new record for such conferences. Definite efforts were made to ascertain points of view, to attach proper weight to each of them and, on the basis of the evidence submitted, to propose recommendations which might be considered objectives or goals in advancing health during the next ten years."

One can only conclude from these observations that medical representatives were pleasantly surprised by the coöperative spirit which prevailed. How acceptable the House of Delegates to the American Medical Association will find the "areas of agreement" still remains to be seen.

This observer came away with impressions which were naturally at variance with those of others in attendance. Admitted as a member of the press, he was permitted to attend the sessions of all sections. There were fourteen of them, covering nearly all phases of health and medical care. However, he confined himself exclusively to the Medical Care Section where most of the differences arose.

As the meeting progressed, discussion in this Section became heated and at times tempers flared. The American Medical Association was under fire from time to time throughout the three-day session, being severely taken to task for its opposition to changes advocated by representatives of labor and coöperatives. Despite an agreement that no formal action would be taken, these representatives were insistent that the Section record itself in favor of compulsory sickness insurance. At one point in the proceedings, a statement signed by a majority of this group was presented for adoption. Delegates representing organized medicine, having stated their position at the beginning of the meeting, wisely remained silent. The matter was referred to the steering committee which agreed upon the following points:

"1. Adequate medical service for prevention of illness, care and relief of sickness and promotion of a high level of physical, mental and social health should be available to all without regard to race, color, creed, residence or economic status.

2. The principle of contributory health insurance should be the basic method of financing medical care for the large majority of the American people, in order to remove the burden of unpredictable sickness costs, abolish the economic barrier to adequate medical services and avoid the indignities of a 'means test.'

3. Health insurance should be accompanied by such use of tax resources as may be necessary to provide additional

a. Services to persons or groups for whom special public responsibility is acknowledged, and

b. Services not available under prepayment or insurance.

4. Voluntary prepayment group health plans, embodying group practice and providing comprehensive service, offer to their members the best of modern medical care. Such plans, furthermore, are the best available means at this time of bringing about improved distribution of medical care, particularly in rural areas.

5. The people have the right to establish voluntary insurance plans on a coöperative basis and legal restric-

tions upon such right (other than those necessary to assure proper standards and qualifications), now existing in a number of states, should be removed.

6. High standards of service, efficient administration and reasonable costs require:
   a. Coördination of the services of physicians, hospitals and other health agencies in all phases of prevention, diagnosis and treatment;
   b. Effective coöperation between the providers and the consumers of such services.

7. A medical care program itself will not solve the health problems of the Nation. It must be coördinated with all efforts directed toward providing the people with adequate housing, a living wage, continuous productive and creative employment under safe working conditions, satisfying recreation and such other measures as will correct conditions that adversely affect the physical, mental and social health of the people."

As stated previously, it remains to be seen whether the AMA's House of Delegates will go along with the committee. This observer hazards the guess that if there are differences they will be of a minor nature and readily ironed out. However, the House is unpredictable, and anything can happen.

The most encouraging result of these deliberations was the willingness of proponents of compulsory sickness insurance to lend their full support, temporarily at least, to medical prepayment plans. This was quite a concession. It is the first instance in this observer's recollection when the extreme left and right were willing to join the moderates in a common effort. Many delegates present expressed their satisfaction with the outcome, and a spirit of good will predominated at the Assembly's close.

On the final evening, Dr. Morris Fishbein spoke on "Medicine as a World Problem." In the course of his address, he referred to compulsory sickness insurance as "peasant medicine." There followed a storm of protest from representatives of labor and the coöperatives who charged that Dr. Fishbein had violated an agreement made at the final meeting of the steering committee of the Medical Care Section not to discuss controversial medical issues. Next morning, when the Assembly convened, there was a brief flurry. However, it was not sufficient to disrupt the harmony which had been engendered previously.

Thus concluded the National Health Assembly of 1948. Many favorable comments were heard with respect to the manner in which the medical men had conducted themselves. For his part, this observer was also favorably impressed by spokesmen for labor. Whether one agreed with them or not, they were an able and intelligent group.

Representing the American Medical Association were Dr. James R. McVay, Chairman, and Dr. Thomas A. McGoldrick, a member of the Council on Medical Service; Dr. R. L. Sensenich, who addressed the Section, setting forth the AMA's position; Dr. George F. Lull, Secretary of the American Medical Association; and Mr. Thomas Hendricks, Secretary of the Council. Drs. McVay and McGoldrick were members of the steering committee of the Medical Care Section.

Wherever he goes, Dr. Fishbein is a dominant figure. One gathered this in discussions with delegates and the medical men present. He was, so far as they were concerned, "Dr. AMA."

Only praise was heard for the manner in which the various sections were conducted. Dr. Hugh R. Leavell of the Harvard University School of Public Health, Chairman of the Section on Medical Care, was eminently fair and presided with good humor. Mr. Oscar Ewing, Federal Security Administrator, largely responsible for the Assembly, was present at several sessions. There can be no question as to his sincerity in wishing the Assembly to come to its own conclusions.

As to the complexion of the Assembly's Section on Medical Care, that was quite another matter. Those who disagreed with the medical profession in regard to compulsory sickness insurance were certainly in the majority. How they had been chosen is not known to the observer. Nevertheless, it appeared that whoever had charge of the invitations was sympathetic to their point of view.

If there is any suggestion that might be made to Mr. Ewing, it is this: delegates to any future National Health Assembly who participate in the Medical Care Section should be truly representative and a cross section of all groups interested in the provision of medical care. They should include, in addition to officers of the AMA, delegates from each state medical organization. The latter are closer to the rank-and-file of the medical profession, and are therefore in a better position to interpret the spirit which prevails in the Assembly. This is as important to the average physician as what is said.

The problems discussed in the Section on Medical Care will not, in this observer's opinion, be finally solved for a long time. In the meantime, there should be adequate opportunity for full discussion by delegates representing all elements of the population. Only by such means can a program acceptable to all be developed.

T. W.

II. EDUCATION IN THE HOSPITAL

Financing the Hospital

Of the numerous facets to modern hospital education, none is more pertinent at this time than the one having to do with financing the institution. Elsewhere in this issue, Mr. Lawrence Drake calls forcible attention to the faulty financing methods among present-day hospitals. In order that this problem may be more adequately approached it is necessary that the entire personnel of the institution be educated along the lines of a possible solution.

If it is the primary function of the hospital to treat patients, the financial attitude must be positive. There should be no loss to the institution on bed occupancy. This means that patients must be divided into several groups on the basis of the origin of payment:

1. Patients who pay fully for their hospitalization must pay for all they get but should not have to pay a premium aimed at decreasing a hospital deficit.

2. Patients who have prepaid insurance must be protected by their policies to the full extent of hospitalization costs. Otherwise the hospital must insist that the policy protection be considered only an indemnity beyond which the patient himself must make up the difference. Thus in this group also the hospital books must balance.

3. Patients whose hospitalization is supported by the Community Chest or similar organizations must be supported to the full cost of their treatment. Partial payment for Community Chest patients places an unreasonable strain upon the unendowed institution.

4. "Tax eligible cases" must be paid for in full by the community government if the society itself is not to be indebted to the hospital to the extreme detriment of that institution.

In order that financing may be achieved under this plan, cost accounting becomes essential. There is an obligation on the part of the hospital to set up a system of accounting that provides an accurate statement of costs available at any time to an authorized body,—the same accounting system to be adopted by all voluntary hospitals.

Furthermore, this system makes possible an evaluation of the problem of luxury service's place in the hospital program. In other words, if a minmum of adequate hospital care may be furnished for $12.00 a day, can we justify the additional care that might be possible for $15.00

a day? Only by knowing accurately what things cost in the hospital can such decisions be made. Also, critical examination of many items against their cost will show that often things taken for granted are not justified at all.

If collateral functions of a hospital include diagnostic clinics, cancer detection, outpatient services, and highly specialized work, then provision for this should not be charged to the patient who occupies a bed, but funds should be made available by endowment, contributions, or appropriation from the municipal treasury. These extraordinary expenses should not be saddled upon persons already burdened by the heavy expenses of hospitalization.

The teaching function of a hospital is an essential part of its activity. However, in so far as the support of patients in the hospital is necessary to this function such support must be on an endowed basis. The average hospital today does not have sufficient endowment to take care of more than a very limited number of patients. For this reason the four groups listed above must be considered the basic ones into which the ordinary patient load must be divided. With these arguments in mind a number of specific suggestions can be made which would aim at improvement of the hospitals' situation in this present crisis:

1. The Washington hospitals should withdraw from the Community Chest and take care of their own drives for funds. This would prove a valuable function for the Hospital Council.
2. Group Hospitalization, Inc. should make full pay settlement for cases hospitalized under their insurance even if this requires that their rates be raised.
3. The Medical Society of the District of Columbia should support legislation to make available funds for full payment of the costs of hospitalizing "tax eligible patients."
4. The Medical Society should oppose the tendency for hospital boards to drop physicians from their membership. Indeed, every effort should be made to draw physicians closer to the management of their institutions.

C. S. W.
D. S.

CANCER DETECTION CLINICS

There seems to be some confusion in the minds of physicians and laymen alike regarding the nature and purpose of cancer detection clinics. It is, therefore, appropriate at this time to briefly outline and explain some of the facts over which a misunderstanding exists. Cancer detection clinics are places where "routine physical examinations of well persons are done for the purpose of discovering cancer in its early and most readily curable stage." They are encouraged and partially subsidized by the American Cancer Society, provided they conform to the regulations of the American College of Surgeons and the policies of local county medical societies.

Some of the better known detection clinics were established over ten years ago in New York, Pennsylvania, and Illinois, where their undisputed value has been established. Locally your medical society has approved the establishment of cancer detection clinics at the following places: Doctors Hospital, Warwick Memorial Clinic, and the George Washington University Hospital. These are functioning at the present time, and it is hoped that before the first of the year this number will have been more than doubled.

All clinics established at hospitals are supervised by the respective hospital staff, who adopt their own regulations and policies governing the professional work of the center. The ultimate objective is to detect sooner than otherwise early cancer, precancerous lesions, and areas of chronic irritation or abnormal physiologic conditions which might lead to cancer. In addition the clinics are designed to inform the public of the early signs and symptoms of cancer and direct the patient to the proper channel for information, diagnosis, and treatment. It cannot be emphasized too strongly that these clinics are not diagnostic clinics; neither are they treatment centers. Only presumably well persons are admitted. All persons who pass through the clinic are referred back to their private physicians together with a letter explaining the findings. In cases without a private physician the patient is referred to the MEDICAL BUREAU, where a list of names of physicians will be provided.

The clinics recommend the semi-annual examination of the general public with the hope that more and more physicians will undertake to make these examinations in their own offices. The examination as given can readily be carried out in any doctor's office.

At the present time no fixed fee is charged the patient for the examination; however, to help meet the cost of operation, the Cancer Control Committee of the Medical Society of the District of Columbia has recommended that a "contribution of $10 be accepted by the clinic." Certain deficits, if any, will be made up from funds of the local chapter of the American Cancer Society.

The American Cancer Society is interested in any undertaking which has as its purpose the control of cancer. Its interest in these detection clinics is to help them maintain their services and to continue their splendid work. It may not own or operate any type of clinic at any time. The American Cancer Society works in close collaboration with the Medical Society of the District of Columbia and will under no circumstances sponsor any project that does not meet the approval of your Society.

Cancer detection clinics represent the first step in the control of this dreaded disease and have proven their value through more than ten years of continuous operation. They are sponsored by the American Cancer Society and have the approval of the American Medical Association, American College of Surgeons, and the Medical Society of the District of Columbia. Their purpose is to detect cancer in its curable stage, to disseminate scientific knowledge regarding the disease, and to educate the public to be examined more often by their own physicians. With the expansion of this program and the coöperation of the medical profession, in general, cancer can be stopped and eventually eliminated as a major cause of death.

Hospitals desirous of establishing an approved cancer detection clinic should direct their request to the Cancer Control Committee, District of Columbia Medical Society. Information relative to available financial aid and administrative guidance can be obtained from the District of Columbia Division of the American Cancer Society, 1200 Fifteenth Street, N. W., Washington, D. C.

R. M. C.

MEMBERSHIP

The following applicants for membership will be voted on at the meeting of the Executive Board, July 26, 1948:

For Active Membership

Harry Justin Crawford, Georgetown University—1921
Arcangelo Raffaele T. D'Amore, Ohio State University—1943
Hamilton Peacock Dorman, University of Maryland—1943
Mortimer James Folston, George Washington University—1942
Robert Hunter, Columbia University—1943
Morris Hirsh Rosenberg, George Washington University—1941
Charles Daniel Scheuch, George Washington University—1944
Donald Reginald Sickler, George Washington University—1937
Robert Browning Sullivan, Georgetown University—1944
William Nathaniel Thomas, Jr., University of Virginia—1942
Francis Louis Zinzi, Georgetown University—1940

For Associate Membership

Cyrus H. Maxwell, Harvard University—1928
Joseph Byron Trainer, University of Oregon—1946

THE MEDICAL PROFESSION AND THE HOSPITAL CRISIS

LAWRENCE DRAKE*

Washington

Since last November, when the *Nation's Business* published my article, "Is Your Hospital on the Job?" I have been running an endless gantlet of flailing knuckles. On one side, members of the medical profession have been lambasting me for contending that today's hospitals, if they are to win the necessary public support, must be integrated health centers and not merely marginal "bedding down" facilities with an occasional dispensary. They saw the devil of corporate medicine leering behind my words. On the other side, the Sahibs of the hospital have been attacking me furiously for daring to suggest that the demands of a progressive and intelligent hospital service make it necessary that doctors be put on the governing boards.

Obviously doctors and hospitals distrust each other. But what neither side seems to realize is this. The distrust each side appears determined to nourish springs from a very narrow-minded and even ignorant view of its own position in the medical picture. Eliminate the voluntary hospital as the community medium for providing the essential institutional facilities and services to a medicine of free choice, and the private practitioner must shortly become an anachronism. Eliminate the private practitioner and the voluntary hospital loses practically all justification for its existence.

By way of providing a succinct reminder of these facts, the *New York Times* recently printed the following two stories side by side. One story reported that Johns Hopkins Hospital, burdened with a deficit which it was estimated might run as high as $2,000,000, was suffering its worst financial crisis. The second story revealed that the Amalgamated Clothing Workers planned to establish a $1,000,000 "Health Center," with a $500,000 annual operating budget, to provide "free medical services" to its 60,000 members in metropolitan New York.

The union's action takes on added significance in the light of the fact that the hospitals of Greater New York, like Johns Hopkins, are facing what they have declared for months to be the greatest financial crisis in their history.

Crippling deficits, with seeming public indifference, on the one side, and organized public expenditure on a very large scale for an integrated "Health Center," on the other, should make every doctor stop and think. No amount of ideological hoopla can alter the telling fact that 60,000 New Yorkers registered a resounding vote of "no confidence" in the city's hospitals and private practitioners. And backed the vote with money, too.

That corporate medicine is the result of the union's undertaking is only incidental to its purpose—to provide its members with an integrated health center. The union is not going about it the right way. However, it cannot be said that the voluntary hospitals and the medical profession, facing this inevitable trend, have done anything to show anybody the right way to do it.

The governing boards of the voluntary hospitals and the medical profession must get this fact straight. The combination of forces that have made the public and our Government so extraordinarily health-conscious will inexorably determine the course of medical and hospital history. The private practitioner can become the articulate exponent of these forces, the leader, or he will inevitably become their pawn. If the people must take medicine over to get the integrated health services they need, they'll do it. One union will set the example for a dozen others. If the private practitioner wishes to survive on his own terms, he can do so only by making a conscious effort to negotiate the deal by adjustment to the new conditions.

The medical profession's attitude of complacent opportunism toward the voluntary hospital must be overcome. There is something seriously wrong with the hospitals; and the attitude of the medical profession, as well as some of the practices it permits, are in good part responsible for what is wrong.

From coast to coast, and with very few exceptions, our voluntary hospitals are mired up to their ears in crippling deficits. The hospitals would have it that nothing else is the matter with them. They are just short of money. This attitude is strongly challenged by the fact that they have got themselves into this condition while enjoying an unlimited market for hospital services.

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* Mr. Drake is the author of several articles on surgery reprinted in the Science Yearbook. His articles on anesthesia attracted the attention of the American Society of Anesthesiologists. He is now their Public Relations Adviser.

In the course of his investigation of the hospital situation, he has visited institutions in Washington, Baltimore, Boston, Cleveland and New York.

Almost 50,000,000 Americans are covered by hospitalization insurance, and the number is rising by millions each year. Certainly, before a man or woman will pay for hospitalization insurance, he or she must have a fairly adequate idea of the importance of the hospital. About 9,000,000 Americans used the voluntary hospitals last year. There is something wrong with the attitude and policy of an institution that cannot make these numbers count, and count very effectively, in building up the public support it needs.

The average American has been made profoundly aware of the increasing menace of degenerative diseases. The radio, the newspapers, the magazines, articulating a variety of health drives, have educated him to an appreciation of the importance of continuous research, as well as of proper diagnostic and clinical facilities, in the fight to cope with the diseases he has come to dread.

The average American is fearful of the economic consequences of ill health, or of a sudden and prolonged illness. His interest in hospitalization insurance, and in the subject of health in general, is a reflection of this anxiety. No man in all history has been better prepared by education, economic and social experience, and current news, to support an intelligent hospital program.

The American family has developed a consciousness of the cosmetic importance of good health, as key to economic and social security, such as has never before been seen. It is a very active consciousness, too.

It is in the face of this epically favorable situation that the voluntary hospitals have failed, and on an equally epic scale, to win the public support necessary to their survival.

The hospitals have failed because they have shockingly failed to grasp the fact that the average citizen, with his quite selfish interest in his own and his family's health, has become the center of gravity in the hospital situation.

The role of philanthropy in financing hospitals has long been a thing of the past. The magnitude of the hospital's changed role as normal necessity to every citizen has ruled out the philanthropic angle. It is the $2 to $10 of the average citizen, and the scores of millions like him, that the hospital must look to. And the average citizen is very selfish about it. He has become strongly aware that his health is the foundation of his security; that his family's health means its social as well as economic security.

The average citizen knows, as the facts show, that the hospital is very important to him. To appeal to him, the hospital must touch his special interest in it; what it has to offer him and his family; why its needs are important to him and his family; what it will do with his money that will assure him and his family the security, through better health and better care, that he is so anxious about.

The hospital has failed to recognize him as the obvious and great potential source of its support. It has also failed to see that the position of the average community hospital is obscured in the mind of the average citizen by the din of the many health drives—cancer control, tuberculosis control, heart disease research, infantile paralysis, etc., etc. He is perpetually agitated and made anxious by these drives. The hospital can give his agitation and anxieties a constructive direction, serving its own purpose, only by presenting itself to him, on his terms, as the integrated answer to the whole disturbing effort. The hospital as integrated health center must become the average citizen's way of escaping from his anxieties.

Here is the hospital-conscious and health-conscious citizen, representing nearly 50,000,000 others like him, all covered by hospitalization insurance. He can understand why it must take an organized community effort to provide the progressive hospital he consciously or subconsciously desires. But he practically doesn't figure at all in the hospital's appeal for support. When the hospital does appeal to him, it does so on the premise of least concern to him, a forced premise at best, the premise of indigence, of charity.

When the hospital does make its public appeal for funds, it floods the newspapers with horrible muck, turned out by the uninhibited drivel-slingers hired in the name of public relations, presenting the hospital as a haven for the miserable and the unfortunate. The average citizen is repelled by the stigma of semi-indigence this presentation casts over every hospital patient. And instead of an institution that means his health, the safeguard of his security, what has he . . . ? What concretely is he to support? What does it offer him by way of allaying his many anxieties?

The term "indigence," and what it stands for, is the Achilles' heel of the voluntary hospital. Not because it can be used honestly to explain the enormous deficits the hospitals have run up. Far from it. But because it has become the honored sanction for the hospital's stupid public relations policies, for its bad credit practices, for its frequent incompetence, and for quite a few dishonesties. It is largely responsible for the disease of deficititis that is undermining the voluntary hospital.

Thus the problems the voluntary hospitals must solve, if they are to win the public support necessary to their survival, fall into two broad categories:

1. They must readjust themselves, both in their concept of their role and the services they must offer, to the needs and desires of the average citizen. They must make this readjustment convincingly complete so as to be in a position to appeal to him for his support on honest, objective, concrete evidence, significant to him.

2. They must get rid of the whole indigence complex. It must be eliminated from their public relations policy, as well as from all their practices, from slovenly bookkeeping methods to the trick of soaking the paying patients.

The hospitals will find it very difficult, if not impossible, to achieve either one of these objectives—for the time is getting short—without the sympathetic coöperation and the organized support of the medical profession. The medical profession must take a strong stand to curb the obstructive opposition of individual members and various nuclei to every progressive move hospitals make to enlarge their services, particularly in the direction of improved diagnostic facilities.

More than that, the medical profession must become a positive force in encouraging all hospitals to develop in the direction of becoming integrated health centers; in encouraging smaller hospitals to become affiliated with larger institutions, so that each community can be made to feel that its institutions are part of a responsive and progressive medical effort, and each hospital can be given the honest justification for claiming the full support of its community.

The hospitals will not be able to dispose of the indigence complex without equally strong backing from the medical profession. The time has come when the medical profession must take the stand that it is not honest, and it is immoral, to run a hospital into a possibly fatal deficit, endangering the whole public investment in the institution, by promiscuously admitting indigents in numbers beyond what the hospital budget can support.

It is not honest because a hospital is a public trust, and those responsible for its administration owe it to the public, in common honesty, to safeguard the public's interest and the public's investment in the institution.

It is immoral because the practice encourages public indifference to the problem of indigence as a social problem, not because the public chooses indifference but because through this practice the public is almost never allowed to face the issue squarely. It is the moral responsibility of the government of each community to provide adequate compensation to hospitals for the care of indigent citizens. The hospitals and the medical profession owe it to themselves and to their communities to force the government of each community to stand up honestly, and without possibility of evasion, to this moral responsibility.

The habit in many hospitals associated with teaching institutions, as well as among many supporting residency training programs, to run themselves into serious deficits simply to supply staff cases for overambitious or incompetently planned training programs—this habit will one of these days bring the government into the hospital in a big way. There is nothing humanitarian about this practice. It is a Robin Hood trick at best, perpetrated as often as not for purely selfish reasons.

Unless this indigence complex is wiped out, the hospitals will in all probability continue to run into deficits. Whereas to win the broad public support they need, on the condition it is available to them, the total emphasis of their drives for funds should, must be, on planned future needs,—for expansion of facilities, for more and improved equipment, for additional research in important fields, additional outpatient services, expanded teaching and training programs. Their drives must tell each citizen: Your health is the foundation of your security, and your health means your hospital. To serve you and your family, we need these things.

If the private practitioner and the voluntary hospital want the average citizen to support them and to defend their interests, then it is up to them to indicate the mutually beneficial foundation for this support. Common social interests and a common social morality must be parts of this foundation.

Close coöperation between the voluntary hospital and the medical profession is demanded by the challenge both face.

History has never discarded a profession, an institution, or a society while it possessed effective capacity to perform its necessary and historically dictated services with any efficiency. On the other hand, nothing has ever saved a profession, an institution, or a society when it lost the resilience and the conscious capacity to respond effectively to the challenge posed by the historic situation.

The challenge the private practitioner faces today is more than clear.

DR. MACATEE HONORED AT TESTIMONIAL DINNER

More than 140 colleagues and friends of Dr. Henry Cook Macatee gathered at the Chevy Chase Club on the evening of April 22 to honor him for his services to the profession and the community over a period of forty years.

Dr. Herbert P. Ramsey, chairman of the committee which arranged the Testimonial Dinner, presided at the dinner and proved an accomplished toastmaster. Dr. Prentiss Willson gave a delightfully reminiscent account of Dr. Macatee's professional activities throughout the years; Dr. Raymond T. Holden, President of the District Medical Society, reviewed the offices Dr. Macatee had held in the Society. He was Recording Secretary from 1905 to 1920, being elevated to the office of President in 1921. A few years later, 1929, he was elected delegate to the American Medical Association, in which capacity he served with distinction for fourteen years. In grateful recognition of these and other services to the Medical Society, Dr. Holden presented him with a Distinguished Service Certificate.

Dr. Macatee's association with Garfield Memorial Hospital, where he had served as extern, intern, attending and consulting physician, was briefly reviewed by Mr. Clarence A. Aspinwall, member and former President of the Board of Directors of Garfield. From 1935 until 1944 Dr. Macatee was President of the Medical Staff of the Hospital.

Dr. Helen Gladys Kain, in behalf of the Women's Medical Society, voiced the appreciation of its members for the inspiration and guidance they had received from Dr. Macatee.

Dr. John A. Reed, President of Health Security Administration, succeeding Dr. Macatee in that office, presented him with a Certificate of Service in behalf of HSA. Dr. Macatee was its first President, serving for twelve years, from 1936 to 1948. Many of his associates at Garfield Hospital and Health Security Administration attended the dinner.

Dr. Macatee responded to the speeches and expressions of gratitude for his services in his usual gracious manner. He recalled some humorous experiences from his many years in practice; he described his early associations with the Medical Socity and the Medical Association and the city of Washington as he remembered it in those days. Following the program Dr. and Mrs. Macatee received the individual congratulations and good wishes of the friends present.

Members of the committee who assisted Dr. Ramsey in arrangements for the dinner were Drs. Alva D. Daughton, Harry H. Kerr, Watson W. Eldridge and J. Russell Verbrycke, Jr. Dr. Verbrycke and Dr. Macatee have shared offices for many years.

PROCEEDINGS OF THE ANNUAL BUSINESS MEETING

The Annual Business Meeting of the Medical Society of the District of Columbia, May 5, was attended by 225 members and guests, a larger number than is usually on hand for business meetings. President Raymond T. Holden presided. "Reports of Officers and Boards and a Review of Committee Activities for 1947–1948" were accepted without reading since copies of the reports had been mailed in advance to the membership. The Supplementary Report of the Executive Board was read and adopted as a whole with the exception of that portion relating to an amendment of the Society's Constitution and By-laws providing for intern and resident membership.

Dr. Roscoe L. Sensenich, of South Bend, Indiana, President-elect of the American Medical Association, addressed the Society on "Modern Trends in Medicine" following the business session.

Annual Report of the Chairman of the Executive Board

The Chairman of the Executive Board, in presenting his report, summarized the progress of the past year as follows: continued gain in membership; increasing demands upon the organization staff; and an expansion of office facilities necessitated by such demands. "It is apparent," he said, "that the Society is rapidly becoming a major state medical organization from the standpoint of its functions."

The Chairman then reviewed briefly by months the action taken on Society matters by the Board. He presented to the Society for election to permanent membership 172 Active and 32 Associate members who had served a probationary period of at least a year, in accordance with Amendment XI of the Society's Constitution and By-laws.

With regret the Chairman reported the death of 25 members during the past year.

Report of the Secretary

The Secretary submitted his report with the observation that the prewar program which he had expected the Society would be pursuing by 1947–48 was still in the future, and since conditions are never the same after a world-wide conflict, it is probable that the course of the Society will never return to the old paths. Personal service to members had been stressed since the War, and to fulfill its responsibilities the Society had found it necessary to employ a larger staff of office personnel and to provide more office space to accommodate its expanded activities.

Membership figures continued to increase during the past year. Over the past five years the figures appear as follows:

	1944	*1945*	*1946*	*1947*	*1948*
Active	915	931	978	1,114	1,192
Life	63	70	76	82	83
Associate	204	214	215	232	247
Honorary	9	9	9	11	15
	1,191	1,224	1,278	1,439	1,537

In his official capacity or as spokesman for the Society, the Secretary had attended 172 meetings, exclusive of a number of small meetings which were not recorded.

The 18th Annual Scientific Assembly, held at the Hotel Statler, was the most successful meeting sponsored by the Society. The attendance of 3,028 broke all previous Assembly records.

The Postgraduate Lectures on the Clinical Application of the Basic Sciences, presented during the month of March, were well attended and received.

Although he curtailed some of his community activities more than a year ago, the Secretary still took an active part in four organizations, many of whose activities are allied with the field of medicine. He was a member of the Committee on Public Health of the Washington Board of Trade, and chairman of the Subcommittee on Coöperation with Medical Societies and Other Associations. He was a member of the Traffic Advisory Board to the District Commissioners, a member of the Executive Committee of the Washington Metropolitan Health Council, and a member of the Interprofessional Conference of the District of Columbia, which he helped establish.

Much time was devoted during the past year to Medical Service of the District of Columbia, the Society's prepayment plan. On April 1, the date of beginning operation, 814 physicians had enrolled in the plan. All administrative procedures have been taken over by Group Hospitalization, Inc. The Board of Trustees of the SERVICE will supervise the plan and determine policies. The classifying of physicians according to type of practice will continue to be the responsibility of the Society.

The Secretary reported that MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, the Society's official organ, had doubled in size during the past nine years. The circulation is now 2,200. Although income has materially increased, costs of publication have gone up considerably, and higher in proportion to income.

The Secretary, who is also Managing Editor of the ANNALS, is a regular contributor to the publication. Dr. Wallace M. Yater, who selects for publication and edits all scientific material, is assisted in this task by an able corps of Associate Editors.

MEDICAL BUREAU has made gratifying progress in the past few years. The Secretary is technically responsible for its administration, but he credited a great share of the BUREAU's efficiency to Mr. J. Richard Connelly, who has been Manager of the BUREAU for the past two years. At the present time there are 568 subscribers to BUREAU service, of which 365 are subscribers to the Alternate Listing Service and 203 to the Telephone Secretarial Service.

The BUREAU is now established in new quarters at 1710 M Street, N.W., which are larger and more adequate than those which it previously occupied.

The Secretary continued as Group Treasurer for the physician-subscribers to Group Hospitalization, Inc. On March 1, 1948, there were 643 subscribers, or an increase of 131 over the previous year.

The Secretary reminded members of other services which are available to them through the Society's Executive Offices. An employment service is maintained; an addressograph service is on call for sections, smaller medical societies, and individuals; cards for special parking privileges may be secured upon request; and the official AMA automobile insignia may be purchased. The Secretary also assisted many members in matters relating to malpractice insurance, licensure, and other personal matters.

The Secretary fulfilled a number of speaking engagements both in Washington and elsewhere. As chairman of the newly organized national group, Medical Society Executives' Conference, he presided at the organization's first annual meeting, July 11, 1947, at Atlantic City, New Jersey.

As Chairman of the Committee on Arrangements for the Conference of State Secretaries and Editors, held in Chicago in November, 1947, under the auspices of the AMA, he aided in planning the program for that meeting. At the Conference he was elected Chairman, the first lay medical executive to serve in this capacity, and presided as moderator at the State Medical Journal Clinic, a feature of the Conference.

In March he addressed the Annual Secretaries' Conference of the West Virginia State Medical Association at Charleston, West Virginia.

The Secretary concluded his report with an expression of appreciation to members of the office staff, who have rendered faithful and efficient service, and to the MEDICAL BUREAU staff, who have acquitted themselves creditably. He also thanked the Society's officers and members for the consideration and friendliness shown him and the office staff.

ELECTION OF OFFICERS

There was only one additional nomination for office, that of First Vice President, made at the March business meeting in addition to the slate presented by the Nominating Committee. The following officers were elected:

President-elect: Dr. Walter Freeman
First Vice President: Dr. Charles P. Howze
Second Vice President: Dr. Caroline Jackson
Member of Executive Board: Dr. Raymond T. Holden
Member of Board of Censors: Dr. Michael J. McInerney
Delegate to American Medical Association: Dr. Herbert P. Ramsey
Alternate Delegate to AMA: Dr. Hugh H. Hussey

Dr. John Minor, President-elect of the Society, will assume office as President on July 1, 1948. Dr. Freeman will take office a year later.

REPORT OF THE BOARD OF CENSORS

The Chairman reported that the Society's membership had reached 1,538, the highest point in the organization's history, although during the period May 1, 1947 to May 1, 1948, only 176 applicants were recommended for election as against 329 the previous year.

The survey of practicing physicians in the District of Columbia, which had been recommended a year ago, was completed during the past year (see October, 1947 issue of MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA). On the basis of data gathered, it was concluded that there is now about the same number of physicians in relation to population that there was in 1941. There is apparently no surplus of physicians in the District of Columbia.

Four nationally known physicians were recommended to Honorary membership in the Society. They were Major General Raymond W. Bliss, the present Surgeon General of the Army; Brigadier General Albert W. Kenner and Major General Shelley U. Marietta (retired), both of whom have served with distinction in the Medical Corps of the United States Army; and Dr. Olin West, formerly General Manager and Secretary of the American Medical Association, who retired in 1946 after a long and distinguished medical career. The first three were elected to Honorary membership by the Society, January 14, 1948, and Dr. West on March 3, 1948.

SUPPLEMENTARY REPORT OF THE EXECUTIVE BOARD

On occasion, members of the Society have mildly protested the reading of what they describe as wearisome reports of Society activities. Your Board would be considerably relieved if it could carry on its activities without making reports, particularly lengthy ones. However, it has no option in the matter, for the Society's Constitution and By-laws provides that "Wherever a matter of general policy is involved whether originating in the Executive Board or referred to it by the Society, the question shall be submitted to the Society as a whole for action with the recommendation of the Executive Board," and that "At each business meeting, the Chairman of the Board shall inform the Society of the matters considered by the Board and the disposition thereof prior to said meeting and subsequent to the last report so that the Society shall be kept fully informed at all times of the activities of the Executive Board." The Chairman of the Board is also required to make an annual report in writing of the activities of the Board for the preceding year.

Reports are therefore mandatory. Their length depends, of course, on the subject matter. Every effort is made to limit their contents to pertinent facts and to make them as brief as possible. This supplementary report, your Board believes, is an example of completeness as well as brevity. It trusts that you agree with this view. If not, the Board will most heartily welcome any suggestions you have to offer.

Election of a Member of the Board of Trustees of Group Hospitalization, Inc.—Under date of February 23, 1948, Mr. E. J. Henryson, Director of Group Hospitalization, Inc., reminded the Medical Society that the By-laws of Group Hospitalization provides that the Society name a member to its Board of Trustees each year. This year it is requested to elect a trustee to succeed one of the following whose terms expire this year: Walter B. Clarkson, Joseph H. Himes, and Dr. Walter A. Bloedorn. The Board at its meeting on April 26, 1948, voted unanimously to recommend Dr. Bloedorn's election to Group Hospitalization's Board of Trustees for another term.

Amendment to By-laws of Medical Service of the District of Columbia Adopted.—Consideration was recently given by the Board of Trustees of MEDICAL SERVICE, the Society's medical prepayment plan, to the participation of physicians who are not members of the Society. At the present time, the By-laws of the SERVICE provide that participating physicians must be Life, Active, or Associate members of the District Medical Society. Inquiries were made of the Associated Medical Care Plans, the Virginia Medical Service Association, and other groups in the prepayment field to ascertain what steps they had taken with respect to nonmedical society members. It was learned that while most prepayment plans provide for their participation, they have no voice in the management of their affairs.

Following considerable thought and discussion, the following amendment to the By-laws of MEDICAL SERVICE was adopted:

41 (b) NON-PARTICIPATING PHYSICIANS

Medical services may, at the discretion of the Board of Trustees, be rendered subscribers by legally qualified doctors of medicine in good standing in other medical societies affiliated with a national medical organization, provided *such physicians agree to conform to the rules governing the operation of the Service.* Such physicians shall not have a vote in the management of the affairs of the SERVICE.

This amendment which, it will be noted, differs slightly from that appearing in the agenda sent you (italicized words added) will not only permit the participation of physicians belonging to nearby county medical societies who are not affiliated with the District Medical Society, but of members of the Medico-Chirurgical Society, Inc. of Washington. The latter, of course, is the organization representing the colored physicians in the District. Incidentally, similar action with respect to non-medical society members was taken by the Virginia Medical Service Association.

It will be of interest to you that 858 members of the Society have now agreed to participate in the SERVICE. As of May 1, 1948, there were between 12,000 and 15,000 subscribers and dependents covered by SERVICE contracts. Group Hospitalization officials have expressed themselves as very well satisfied with the progress of the plan.

A detailed report will be made to the Society in the fall when the SERVICE has been in operation long enough to draw definite conclusions.

Adoption of Amendment to the Society's Constitution and By-laws.—In its January 14, 1948, report, your Board presented an amendment to the Society's Constitution and By-laws, proposed by the Membership Committee, providing for a special membership classification for interns and residents. It expressed the belief that every effort should be made to interest young physicians in the Society during the latter years of their medical training. In the Board's opinion, this could best be accomplished if they became a part of the organization.

At this meeting, your Board submits for a vote the following amendment providing for intern or resident membership:

AMENDMENT XV

Section 1. Intern or Resident membership shall be limited to hospital interns or residents who are citizens of the United States, who earn less than $1,200 per year, and who are not engaged in the private practice of medicine. They shall be elected in the same manner as Active members; they shall have the privilege of attending and participating in scientific sessions of the Society, and shall receive its publications and notices of its scientific meetings. They shall not vote or hold office in the Society, but shall be subject to its discipline. Dues for this class of membership shall be $5.00 per year.

Section 2. Intern or Resident membership shall terminate when the income of the hospital intern or resident exceeds $1,200 per year, or if he engages in the private practice of medicine, or upon the termination of his internship or residency.

Orientation Lectures.—This project was decidedly an experiment, although similar lectures had been successfully sponsored by the Los Angeles County Medical Association. It is a pleasure for your Board to report that it proved a most successful undertaking. Several letters have been received at the Society's Executive Offices expressing appreciation for the information imparted at the lectures.

Not all of the applicants or members elected for a probationary period attended the lectures. In fact, only 170 to 180 physicians were in attendance throughout, or about one half of those who should have participated. However, a majority of those absent wrote letters or called to explain why they could not be present.

Your Board is confident that the group who were in regular attendance at the lectures are better informed in regard to the subjects discussed than a majority of physicians who have long been associated with the Society. It is therefore to be regretted that all members did not participate. They would have learned much of value to themselves and the Society.

Lectures were presented on four successive Saturday afternoons beginning April 3. Each session lasted one hour. Subjects discussed were: "Medical Organization (The Medical Society of the District of Columbia: History, Functions, Program, Services, Benefits, Types of Memberships, and Relationship to the American Medical Association)"; "Medical Ethics"; "Medical Malpractice"; and "Medical Economics and Public Relations." Lecturers presented their subjects in a manner which would be of the greatest practical value to the listeners. Seldom have speakers been listened to so attentively.

The lectures in this series will be published in the MEDICAL ANNALS beginning with the July issue. All members would do well to read them for the valuable information they contain.

Prior to the last lecture, a luncheon was given by the Society for all of the applicants and probationary members so as to provide them an opportunity to get acquainted with each other.

Hagner Memorial Library.—On April 15, 1948, the Francis R. Hagner Memorial Library was dedicated with appropriate ceremonies and turned over to the Garfield Memorial Hospital. The Library, realized only after many years of effort, commemorates the high professional attainments of Dr. Hagner.

Committees were appointed several years ago by the Medical Society and the Clinico-Pathological Society for the purpose of planning the Library. The latter committee consisted of Drs. John A. Talbot, Charles P. Howze, and Harry H. Kerr; the Medical Society's, of Drs. Luther H. Reichelderfer, John D. Thomas, and Edward Y. Davidson, the only surviving member of which is Dr. Davidson.

Dr. Davidson has communicated with the Society stating that his committee, having performed its duty, requests that its report that the Hagner Memorial Library is now a reality be accepted and the committee be discharged.

Your Board wishes to express to Dr. Davidson its deep appreciation for his devotion to this project.

Recommendations of the House Committee.—Most of our members are familiar with the duties of the House Committee. The Constitution and By-laws states that it shall "have general supervision of the Society's property; it shall recommend any improvements, extensive repairs, or changes in the property. It shall likewise prescribe such rules and regulations as may be indicated for the proper maintenance and management of the Society's property."

At the present time, the following organizations not directly associated with the Society are making use of its auditorium, library and other facilities: Association of Undergraduate and Practical Nurses, D.C. Dental Society, D.C. Dietetic Association, D.C. Medical Technicians, D.C. Rheumatism Society, Graduate Nurses' Association, Interprofessional Conference, Physician-Veterans of World War II, Registered X-ray Technicians of Washington, Washington Diabetes Association, Washington Metropolitan Health Council, Washington Ophthalmological Society, Washington Orthopedic Club, Washington Psychoanalytic Society, Washington Society for the Advancement of Psychotherapy, Washington School of Psychiatry, and a group of former members of the Selective Service System.

Naturally, with so many outside organizations using the Society's building, there is considerable wear and tear on the property. To maintain its non-taxable status, the Society was advised by its legal counsel that it could not accept reimbursement for light, fuel, and other expenses incurred in the use of its auditorium or library by these groups. It has therefore continued the practice, begun during the War, of allowing the above organizations to use its facilities without any charge whatsoever. Payment is usually made for janitor services directly to the person employed by the Society.

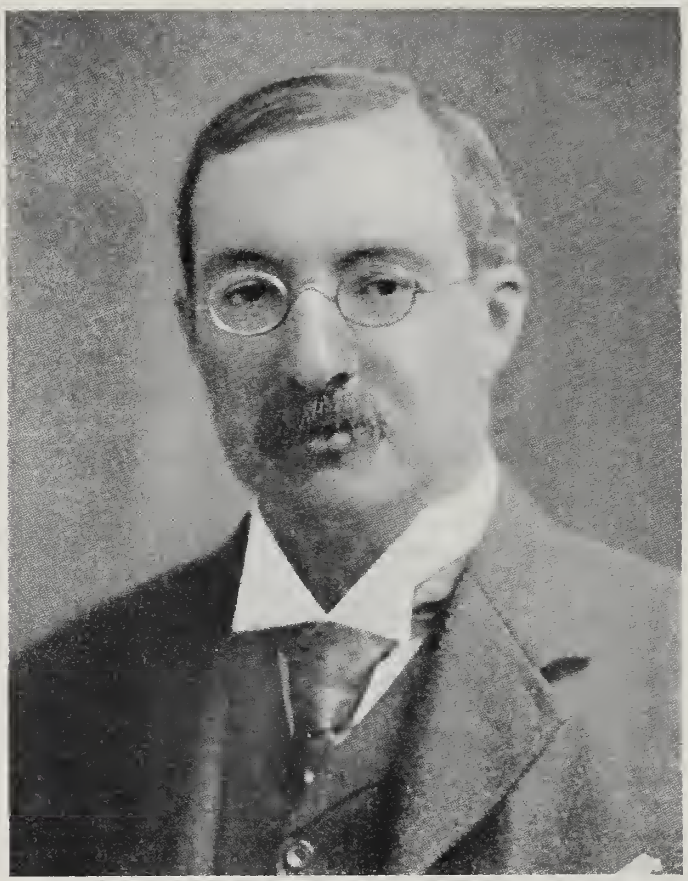
In recent weeks, the House Committee has looked into the matter and finally recommended approval of the following resolution:

> WHEREAS The Medical Society of the District of Columbia was founded for the promotion and dissemination of medical and surgical knowledge, and whereas it has continued to fulfill this obligation by diverse means, including association with allied organizations and by fostering their meetings in the Medical Society Building, and
>
> WHEREAS an act passed by the 68th Congress of the United States of America, Section 2, states: "That the Medical Society of the District of Columbia be and it is hereby empowered to own, mortgage, and convey such property as may be necessary for its purposes, and to make such rules and regulations as it may require, and which may not be repugnant to the Constitution or laws of the United States,"
>
> BE IT RESOLVED that such non-profit allied organizations, which are recognized by and work with the Medical Society of the District of Columbia, may become affiliated organizations when they shall have been approved by the Executive Board of the Medical Society, and
>
> BE IT FURTHER RESOLVED that said Executive Board shall determine and set the contributing fee for each affiliated organization so approved, and
>
> BE IT FURTHER RESOLVED that all moneys which shall be paid by the said organizations shall be used to defray the cost of the maintenance of the Medical Society building and, if there shall be any surplus, such surplus shall be set aside for depreciation of the building and be used when and if major repairs are required.

The foregoing resolution was approved by the Board and submitted to the Society's legal counsel for his opinion.

Conclusion: Unless there is an emergency, this will be the final report for this organization year. The Board believes that this past year has, on the whole, been a very successful one. Certainly it has been one of growth, which appears to be healthy and sound.

Washington Physicians of Yesterday



CAT.

JAMES KERR, M.D., M.Ch.

Maintaining in an argument on shipboard that well-fed sharks would not attack humans, a young surgeon in order to prove his point leaped overboard, swam about among a school of sharks alongside the vessel, and emerged unharmed. That young man was Dr. James Kerr; and the incident was significant of the ruggedness and forcefulness of his character, which was perhaps a reflection of the wild coasts and tumultuous seas of his youthful environment, challenging and beckoning him to adventure. Dr. Kerr pursued a checkered, colorful, and roving career, became a distinguished surgeon, and practiced his specialty in the city of Washington from 1888 to 1911.

A century ago, on December 14, 1848, Dr. Kerr was born in Port Stewart, on the northernmost coast of Ireland, in County Londonderry. He received his medical education in Queen's University, in Belfast (Northern Ireland), graduating in 1870 as M.D. and M.Ch. (Master of Chirurgy).

He then, 1871–73, served as ship surgeon in the transatlantic Royal Canadian Mail Service. During the Ashanti War, 1873–74, he was a transport surgeon in the British Military Gold Coast Expedition. From 1874 to 1880 he was surgeon for an iron-mining company in Londonderry, Nova Scotia.

On July 26, 1876, he married Laurie Jane Bell, cousin of the illustrious inventor of the telephone, Alexander Graham Bell, at Brantford, Ontario, then the home of the Bell family. He met his wife on an ocean voyage; and Dr. William Osler, who was his initimate friend, was best man at the wedding. That wedding had an historical setting, the birth of the telephone; at the very time and place of its occurrence Alexander Bell in his home at Brantford experimentally

(*Continued on page 370*)

News and Personals

The First International Poliomyelitis Conference to be sponsored by the National Foundation for Infantile Paralysis will be held at the Waldorf-Astoria Hotel, New York, July 12–17. Sixty-four foreign governments have been invited to send delegates to the Conference.

According to a communication received from Mr. Claude W. Owen, President of the **Citizens' Advisory Board on the Plan of the National Capital and Environs,** the Medical Society of the District of Columbia is one of seventy organizations which have appointed delegates or representatives to serve on the twelve committees set up to examine the chapters of the Comprehensive Plan as they are available in preliminary form. **Dr. Raymond T. Holden,** President of the Medical Society, has been assigned to the Committee on Universities, Hospitals and Other Institutions. **Mr. Theodore Wiprud** will represent the Washington Metropolitan Health Council on the Housing Committee.

A new residency in General Practice will be inaugurated **in Naval hospitals** on July 1, 1948, according to Surgeon General of the Navy Swanson. The Professional Division of the Bureau of Medicine and Surgery has developed a residency in that phase of medicine which is required to augment the several medical specialties recognized by the American specialty boards in order to supplement the residency training program, now operative, which is designed toward specialization. The program, as planned, will cover a period of three years. During each year of this residency medical officers will receive six months of training in general medicine and related specialties, and six months in general surgery and related specialties. Instruction will be provided by the staffs of the hospitals and outstanding civilian visiting staffs. With the introduction of this type of training Navy medicine has recognized the great need of the general practitioner in the field of medicine.

At the meeting of the **Executive Board,** April 26, **Dr. Walter A. Bloedorn** was nominated to succeed himself as a member of the Board of Trustees of Group Hospitalization, Inc. His selection to this office was approved at the business meeting of the Society, May 5.

Dr. Herman S. Wigodsky, of the National Research Council, who is employed by the Committee on Atomic Casualties, was appointed a member of the Society's Committee on Emergency Medical Service.

The Board requested Dr. Herbert P. Ramsey to attend a meeting in Chicago, June 19, in the auditorium of the American Medical Association, where the amalgamation of the Associated Medical Care Plans and Blue Cross for the purpose of perfecting a national organization will be discused.

The 104th Annual Meeting of the American Psychiatric Association closed at the Hotel Statler, May 20, after a four-day session, with a total registration of more than 3,200 members and guests. At the opening assembly, May 17, Dr. Winfred Overholser gave his Presidential Address and introduced the incoming President, Dr. William C. Menninger, of Topeka, Kansas. A letter of welcome from President Truman was read at this meeting.

During the scientific meetings members of the Medical Society were authors or co-authors of the following papers:

"A Study of Group Therapy in Outpatient Clinics," Drs. Florence Powdermaker and Jerome D. Frank.

"Transorbital Lobotomy," Dr. Walter Freeman.

"Medically Prescribed Exercise for Neuropsychiatric Patients in the Veterans Administration," Drs. A. B. C. Knudson and John E. Davis.

"Group Psychotherapy of Psychotics—Report of Progress," Dr. Joseph Abrahams, Dr. Albert Dreyfuss, and Mr. David Rosenthal.

Among discussants of papers were Drs. Overholser, Robert A. Cohen, Frieda Fromm-Reichmann, and S. Katzenelbogen.

CALENDAR OF MEETINGS

May 1	Washington School of Psychiatry
	D. C. Medical Technicians
	Officers of the American Medical Association
May 3	Washington Ophthalmological Society
May 5	Annual Business Meeting of Society
May 8	Washington Psychoanalytic Society
May 10	Committee on Medical Care in Public Institutions
	Washington Orthopedic Club
May 11	District Dental Society
	Registered X-ray Technicians of Washington
May 12	Scientific Meeting of Society
May 13	Committee on Scientific Exhibits, Annual Scientific Assembly
May 14	Committee on Publicity, A.S.A.
	D. C. Rheumatism Society
	American Psychiatric Association, committee of
May 17	Committee on Cancer Control
	American Psychiatric Association
May 18	Committee on Public Health
	Veteran-Psychiatrists from A.P.A.
	D. C. Medical Technicians
May 19	Scientific Meeting of Society
May 21	Committee on Industrial Medicine
May 24	Committee on Medical Care
	Committee on Medical Care in Public Institutions
	Joint meeting of Committees on Compensation Insurance and Industrial Medicine
	Graduate Nurses' Association
May 25	Joint meeting of College of American Pathologists, Washington Society of Pathologists, and Section on Pathology and Laboratory Medicine
May 26	Section on General Practice
May 27	Committee on Public Meeting, A.S.A.
May 28	Committee on Industrial Medicine
	Committee on Radio, Television and Movies, A.S.A.
May 31	Executive Board

At a special reorganization meeting, May 18, Dr. Morris Fishbein was invited to speak on the "Evolution of Medical Organization." A meeting of veteran-psychiatrists was held in the Medical Society's auditorium, May 18. Major General Paul R. Hawley, Chief of Medicine of Veterans Administration, addressed a special Veterans Administration Symposium, May 19.

Dr. Overholser presided at the annual dinner in the Presidential Ballroom, May 19, where he was awarded the national order of "Al Merito" for "outstanding merit and services to Ecuador and to humanity" by Captain Colon Elroy Alfaro, Ambassador from Ecuador to the Pan American Union. The award was in recognition of the postgraduate courses in psychiatry conducted at St. Elizabeths and attended by physicians from both Central and South America.

Dr. Overholser presented Fellowship certificates to fifty members, among whom were Drs. Robert A. Cohen and Harvey J. Tompkins, of Washington. Miss Mary E. Switzer, Executive Assistant to the Director of Federal Security Agency, was made an Honorary member of APA. The George Washington University Glee Club, under the direction of Dr. Robert H. Harmon, sang a number of selections.

The American Psychoanalytical Association held its annual meeting, May 14–16, preceding the convention of the Psychiatric Association. About 650 registrants were in attendance. Dr. William C. Menninger, who is serving his second year as President of the Psychoanalytical Association and is the incoming President of the Psychiatric Association, was awarded the French Legion of Honor.

Dr. George S. Stevenson, of New York, Medical Director of the National Committee for Mental Hygiene, is the new President-elect of the Psychiatric Association.

The Women's Arrangement Committee planned special activities for wives of delegates and women registrants. Mrs. Harry Truman entertained the ladies at tea at the White House. Members of the Women's Committee were Mrs. Ernest E. Hadley, Chairman; Mmes. Joseph L. Gilbert, Addison M. Duval and Robert T. Morse.

The Medical Arts Society held a dinner meeting at the Kennedy-Warren Apartments, May 10. Justice William O. Douglas of the U. S. Supreme Court spoke on the functioning of the Supreme Court. Present as guests of the Society were President Raymond T. Holden and Secretary Theodore Wiprud, of the District Medical Society. Dr. John A. Reisinger, President of the Arts Society, presided.

The Section on Neurology and Psychiatry presented the following scientific program in the Medical Society's Library, April 1: "Bromism Simulating Multisclerosis," Dr. William Kauffman; "Recent Trends in the Relationship of Marriage Counseling to Psychiatry," Dr. Walter R. Stokes.

New officers were elected by the Section, April 22:

Dr. Joseph L. Gilbert, *Chairman;* Dr. Harold Stevens, *Vice Chairman;* Dr. Vasilios S. Lambros, *Secretary-Treasurer.*

A joint meeting for psychiatrists only was held by the Section and the Washington Psychoanalytical Society, April 22, at which Dr. Alfred C. Kinsey, Professor of Zoölogy of Indiana University, author of "Sexual Behavior in the Human Male," discussed his recent book.

The George Washington University Medical Society held its annual business meeting, May 15. Following the Presidential Address by Dr. Clyde P. Reeves, a scientific program was presented on "Modern Treatment of Eczema and Allied Skin Disorders." Drs. Russell J. Fields and George J. Stuart participated in the program.

Dr. James I. Boyd took office as President for the coming year. New officers elected were:

Dr. Herbert S. Gates, *President-elect;* Dr. Russell McNitt, *First Vice President;* Dr. Florence E. Grady, *Second Vice President;* Dr. Oscar B. Hunter, *Secretary-Treasurer.*

The Society held a Symposium on Recent Advances in Cardiovascular Disease, April 17. The subject was discussed from the cardiological viewpoint by Dr. Louis F. Bishop, Jr., of Bellevue Hospital, New York; from the surgical aspect, by Dr. J. Ross Veal; and from the medical standpoint, by Dr. Andrew G. Prandoni.

The Washington Alumni Chapter of the Medical College of Virginia elected new officers, May 20, as follows:

Dr. C. P. Ryland, *President;* Mr. George Schlosser, Alexandria, *Vice President;* Dr. Thomas Pumphrey, Arlington, *Secretary-Treasurer.*

The alumni chapter met at the Washington Golf and Country Club in Arlington. Speakers included Dr. W. T. Sanger, President of the College; Dr. Rosher Miller; and Mrs. Helen M. Sellers, who is Secretary of the Alumni Association. Dr. LeRoy L. Sawyer presided.

The Washington Orthopedic Club elected the following new officers, May 10:

Dr. Paul J. O'Donnell, *President;* Dr. Milton C. Cobey, *Vice President;* Dr. Everett J. Gordon, *Secretary-Treasurer.*

Members of the Baltimore Orthopedic Club were invited to attend the meeting of the Washington Club, April 12, when members of the staff of Walter Reed General Hospital furnished the program.

Dr. Edward Broocks was host to the **Clinico-Pathological Society,** May 18, at his home in Rock Creek Hills, Md. Two case reports were presented by members: "Regional Ileitis," Dr. Matthew W. Perry; and "Hyperhidrosis," Dr. J. Ross Veal.

The Woman's Auxiliary to the Medical Society of the District of Columbia held its Annual Luncheon at the Congressional Country Club, May 12. Previous to the luncheon, election of officers was held in the Medical Society's building and the following slate elected for 1948–49:

President: Mrs. Edgar E. Quayle
First Vice President: Mrs. Leon A. Martel
Second Vice President: Mrs. J. Chester Brady
Recording Secretary: Mrs. Albert E. Marland
Corresponding Secretary: Mrs. G. Louis Weller, Jr.
Treasurer: Mrs. George H. Crofton

At the annual meeting of the **District of Columbia Tuberculosis Association** at the Y.W.C.A., May 10, progress reports on the partially completed Washington Chest X-ray Survey were made. Speakers included William E. Leahy, Chairman of the Citizens' Committee for the Survey; O. C. Billows, Assistant Director of the Survey; and representatives of the Committee's four sections: Dr. A. C. Christie, Chairman, Medical-Technical; C. E. Bish, Chairman, Community Organization; Leo Miller, Federal Government; Nelson Bell, Public Information. Dr. James J. Feffer, Vice President of the Association, described the preliminary plans for the Survey.

Dr. Verne K. Harvey, of the Civil Service Commission, and Mr. Leahy were among the new members elected to the Board of Directors of the Association. Officers reëlected at the meeting of the Board, May 18, were Mrs. C. D. Lowe, President; Dr. James J. Feffer, Vice President; Dr. Howard M. Payne, Secretary; and Alfred H. Lawson, Treasurer. Miss Jane Hoey, Past President of the Association, J. Austin Latimer and Dr. Verne K. Harvey were elected members of the Executive Committee.

Impetus was given to the **May Child Health Program** of the **District Parent-Teachers Association** by the Medical Society, which sponsored an open meeting in its auditorium, May 15. Dr. Dorothy Donley-Dowd, Director of the Child Center of Catholic University, spoke on "Understanding the Personality of the Preschool Child—A Guide for Adults."

Members of the Society responded generously to the appeal for volunteers to give physical examinations to preschool children in their neighborhood schools. These examinations were held between May 1 and 15.

Dr. John R. Pate was appointed Director of the **Southwest Health Center** by Health Officer Ruhland, April 26. He replaces **Dr. Richard L. DeSaussure,** who has been Director of the Center since its opening in the summer of 1940. Dr. DeSaussure has been transferred to the school medical inspection branch of the Department.

Dr. Pate received his degree in medicine from Duke University Medical School. Last year he was given the degree of Master of Public Health at Johns Hopkins University School of Hygiene and Public Health. At one time he was an Instructor in Anatomy at George Washington University School of Medicine, leaving to head the venereal disease program of the Kentucky State Health Department.

Dr. Jay McLean, Director of the **Bureau of Cancer Control of the District Health Department,** advises that the supply of the manual on the detection of early cancer, called *The Cancer Bulletin*, is barely enough for general practitioners and those specialists engaged in the active practice of medicine. However, the Bulletin will be distributed to all practicing physicians, depending on the supply, if the physician will send to the Bureau of Cancer Control, Room 4010, Municipal Building, 300 Indiana Avenue, N. W., Washington 1, D. C., 25 self-addressed envelopes, 4½ x 9½ inches, with 1½ cents postage affixed on each. There will be 25 issues of the *Bulletin* which will be mailed one issue every two weeks. Because of limited funds for postage, the Health Department cannot assume the cost of mailing these copies. An attractive, clasped binder to hold all 25 issues will be mailed upon receipt of a self-addressed envelope, approximately 9½ by 12½ inches, with 3 cents postage affixed.

A new cancer detection clinic was opened in the outpatient department of the new George Washington University Hospital, May 6, to be known as the **Warwick Cancer Detection Clinic.** It will be headed by Dr. Clarence R. Hartman, Director of the Hospital's outpatient department. About 80 patients will be examined each month. The Clinic will be open from 8 to 12 a.m. each Thursday and Saturday, with appointments to be made in advance.

Howard University received a check for $25,000 from the Damon Runyon Memorial Fund for Cancer Research, Inc., dated May 3, and signed by Walter Winchell. The funds will be used for research in early detection and treatment of cancer.

The District Rheumatism Society held its annual business meeting, May 12, at the Kennedy-Warren Apartments, preceded by a dinner, at which Dr. Paul Holbrook, of Tucson, Arizona, immediate Past President of the American Rheumatism Association, was guest of honor. New officers elected were:

Dr. Carl Berg, *President;* Dr. J. Lawn Thompson, *Vice President;* Dr. Darrell C. Crain, *Secretary-Treasurer.*

A new organization, to be known as the District of Columbia Foundation for Rheumatic Diseases, sponsored by the Rheumatism Society, has been incorporated in the District of Columbia. The Foundation, which hopes to become an affiliate of the newly formed American Rheumatism Foundation, expects to further the study of rheumatic diseases, its first and immediate objective being the establishment of resident fellowships in the local University hospitals.

Officers of the District Foundation are: Mrs. Joseph T. Elward, President; Mmes. Louis Renfrow, K. P. Landon, and Henry Tetlow, Vice Presidents; Mrs. Earl Baldwin McKinley, Corresponding Secretary; Miss Evelyn Kem, Recording Secretary; and James A. Councilor, Treasurer.

The Foundation held a meeting in the Medical Society's auditorium, May 14, which was addressed by Dr. Holbrook, first President of the national foundation, and Dr. Richard Freyberg, of New York, President of the American Rheumatism Association.

The Kober Medical Society held a dinner meeting, May 17, at the Army-Navy Town Club. Dr. Raymond T. Holden, President, and Theodore Wiprud, Secretary, of the District Medical Society, were guests of Dr. G. Victor Simpson, President of the Kober Medical Society, who presided at the dinner. Guest speaker was Kenneth G. Crawford, Editor of *News Week*, who spoke on "The Current Political Situation."

Dr. Custis Lee Hall attended the Sixth International Assembly of the International College of Surgeons, which met in Rome, May 18–23, as a delegate to the meeting from the United States Chapter; he also attended the meeting of the House of Delegates, May 16 and 17, in Rome.

A paper on "Ununited Fractures of the Neck of the Femur" was presented by Dr. Hall at the Policlinico in Rome, under the chairmanship of Dr. Bastinelli. He also addressed the faculty of the University of Turin on the occasion of the Tercentenary of the founding of the Medical School at that University.

Dr. Hall sailed from New York, May 7, on the *Queen Mary*. His return voyage was made on the *Queen Elizabeth*.

Drs. Jacob J. Weinstein and Lester Blumenthal presented scientific exhibits at the annual meeting of the Georgia State Medical Society in Atlanta, April 27–30. Dr. Blumenthal was awarded second prize for his exhibit on "Headache: Diagnosis and Treatment," and Dr. Weinstein received honorable mention for his exhibit on "Parenteral Protein Therapy."

Dr. Benjamin Karpman presented a paper before the Neuropsychiatric Section of the Baltimore City Medical Society, April 8, entitled "Psychopathy as a Form of Social Parasitism: A Comparative Biological Study."

BOOK REVIEW

Blood Derivatives and Substitutes: Preparation, Storage, Administration and Clinical Results Including a Discussion of Shock—Etiology, Physiology, Pathology and Management. CHARLES STANLEY WHITE, M.D., Sc.D., Former Professor of Surgery, George Washington University School of Medicine; Chief of Surgery, Doctors Hospital; Consultant to Garfield Hospital, Providence Hospital, and Columbia Hospital, Washington, D.C., and to U. S. Naval Hospital, Bethesda, Md., AND JACOB JOSEPH WEINSTEIN, B.S., M.D., Associate in Surgery, School of Medicine, George Washington University; Associate in Surgery at Gallinger Municipal Hospital and George Washington University Hospital, Washington, D. C. Price, $7.50. Pp. 484, with 195 illustrations. Baltimore: Williams & Wilkins, 1947.

The authors can justly be proud of this book. Likewise, the members of the medical profession in Washington can justly be proud of the authors, their fellow practitioners. Not only is the book well organized and easy to read, replete with illustrations, charts and tables, and complete as to work done by others in the field, but it is of great practical value. The authors have done some of the fundamental work on the subject and could be placed among the pioneers in this important advance in therapy. The book is organized into chapters in the following way:

Chapter I.	History
Chapter II.	Chemistry and Physiology of Plasma
Chapter III.	Preparation of Liquid Citrated Plasma
Chapter IV.	Storage of Plasma
Chapter V.	Dried Plasma—Preparation, Storage and Use
Chapter VI.	Administration
Chapter VII.	Plasma Fractionation and Fractions
Chapter VIII.	By-Products of Plasma Preparation
Chapter IX.	Plasma Substitutes
Chapter X.	Human Blood Serum
Chapter XI.	Blood Preservation, Transportation, and the Universal Donor
Chapter XII.	Blood Plasma Bank
Chapter XIII.	Shock
Chapter XIV.	Clinical Results with Human Plasma
Chapter XV.	Reaction with Plasma

This reviewer feels justified in urging all physicians, no matter what their branch of medicine may be, to become possessors of this excellent book. Also, no medical technician or clinical laboratory should be without a copy.

W. M. Y.

HOWARD WILSON BARKER, M.D.

(1875–1947)

Dr. Howard W. Barker, a Life member of the Medical Society of the District of Columbia, died February 19, 1947, in Roosevelt Hospital, New York. His death was only recently reported to the Medical Society's office.

CAT.

Dr. Barker was born in Washington, D. C., January 4, 1875. He graduated from National University Medical Department in 1901 and was licensed to practice in the District of Columbia the same year. For a number of years he was the medical officer in charge of U. S. Veterans Hospital No. 92, Jefferson Barracks, Mo.

He became a member of both the Medical Association and the Medical Society of the District of Columbia in 1902, and a Life member in 1943. He was also a member of the American Medical Association.

Surviving is his wife, Mrs. Howard Barker, who resides at 2770 Kingsbridge Terrace, Bronx, New York.

Streptomycin—Hirsh, Vivino and Dowling

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Operations for Peptic Ulcer—Shearer and Mitchell

(Continued from page 341)

present a statistical report on the number of cures, potential failures and complete failures, but we know that we have had some of each.

CONCLUSIONS

We have attempted to point out the fact that the medical men and the surgeons are now both agreed upon the fact that duodenal ulcer is a problem for both and that the simple, uncomplicated ulcer is a medical problem, will heal on medical treatment, and requires surgical treatment only for the complications of the ulcer. Everybody is cognizant of the fact that there is a large psychosomatic element in these patients and that this phase of the problem is a medical problem.

We feel that at the present time the operation of choice in duodenal ulcer is a subtotal gastrectomy and that with our present methods of preoperative and postoperative treatment, with standardized surgery, with careful and well controlled anesthesia, with attention to protein deficiency and anemia, and with chemotherapy we have made the operation as safe as possible and have reduced the morbidity to such an extent that it becomes about the same as any other major abdominal operation. We believe that subtotal gastrectomy is not the final answer but at present is the best surgical procedure we have to offer.

At the present time the operation of vagotomy is receiving a lot of attention, and it would seem that this operation has a definite place in our treatment of duodenal ulcer, but that only time will determine its true relative value.

Delay in Management of Cancer—DeLawter

(Continued from page 346)

examining physician to tell the patient that cancer, if suspected, is the reason for the referral to the diagnostic clinic or hospital in order that the patient's delay in making the appointment will be minimized. Unfortunately, many clinics and physicians will not tell the patient either the tentative diagnosis or the reasons for the referral. Such conditions probably do not exist to the same degree from one private office to another.

CONCLUSIONS

1. A study of the responsibility for the delay in the management of cancer made on 420 cases principally during 1947 suggests that progress is being made in reducing the delay in the diagnosis of cancer.
2. The statistics in this section of the country are approximately the same as those made in another section of the country.
3. The delay between completion of diagnosis and institution of treatment is excessive in 45.7 per cent of the cases studied.
4. The principal available means of reducing the morbidity and mortality due to cancer at this time are early diagnosis and prompt institution of treatment, which in turn can be consummated only by extended professional and lay interest and increased facilities.
5. No case of delay was found to be specifically due to lack of finances.

The author wishes to express appreciation to Dr. Calvin T. Klopp for his kind interest and guidance in this study.

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Washington Physicians of Yesterday—Kerr

(*Continued from page 362*)

established the first telephone installation in history, successfully operating over miles of wire. During his honeymoon at the Philadelphia Exposition in 1876, Dr. Kerr heard a discourse by Lister on the antiseptic technic which he was then introducing; becoming a convert, Dr. Kerr made a trip to Europe to perfect himself in the Listerian methods.

In 1880 Dr. Kerr removed to Winnipeg, then a primitive pioneer settlement just being carved out of the wilderness; and he was active and influential in its development. He served as Health Officer of Manitoba; was an organizer and surgeon of Manitoba General Hospital; and a founder and President and Professor of Surgery of Manitoba Medical College, 1883–88. He was a surgeon in the Canadian Militia during Riel's Rebellion in 1885. From 1882–88 he was Chief Surgeon of the Western Division of the Canadian Pacific Railroad; and in that capacity he selected the site for Banff Hotel, at first intended for a tuberculosis sanitarium, but later becoming a famous tourist resort.

In 1888, at the age of 40 years, Dr. Kerr removed to the city of Washington, where for the remainder of his life he engaged with distinction in the practice of surgery. He was Superintendent and Surgeon of Garfield Hospital, and Surgeon to Providence and Emergency Hospitals and the Woman's Dispensary. He was Professor of Surgery in Georgetown University 1891–94, and also in Columbian (later George Washington) University. He was a member of the Cosmos Club, and a biographee in "Who's Who in America." He had a summer home at Warrenton, Virginia, in which environment it was natural for him to engage, and with success, in the breeding of race horses. He died at Warrenton, February 12, 1911.

The surviving confreres of Dr. Kerr will remember the outspoken forcefulness of his personality and his surgical proficiency. Even after the lapse of these many years, Dr. Kerr is still remembered and eulogized in the Northwest as a "pioneer surgeon." He was a pioneer in the settlement of Manitoba; and with the advantage of Listerian antiseptic methods he pioneered in the development of surgery in fields previously inoperable. He acquired surgical proficiency in his practice among the miners of Nova Scotia and the settlers of Manitoba; and without the aid or prestige of teaching appointments, great hospital connections, or literary publicity, but by sheer force of personal ability he gained general recognition as a master surgeon. He declined attractive offers of appointment on the faculty of McGill University and as Chief Surgeon of the newly formed Johns Hopkins Hospital. His operations frequently attracted numerous interested spectators. In the Washington area he performed a number of "firsts,"—the first cholecystectomy, the first Gasserian operation, the first operation for intussusception (on a child of the late Dr. William M. Sprigg), and others. He thus pioneered in and developed fields of surgery in which his son, Dr. Harry Hyland Kerr (born in Winnipeg in 1881), has continued to engage with great distinction, thus carrying on uninterruptedly and undiminished the special genius and talent of the family.

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OPERATIVE TREATMENT OF ACUTE SUBDELTOID BURSITIS WITH CALCIFICATION*

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THE purpose of this report is to advocate the surgical approach to the treatment of acute subdeltoid bursitis with calcification. The procedure employed is extremely simple, rapid and dramatic in its effect, has not been followed by recurrence, and appears to avoid the development of chronicity which occasionally occurs with other methods. It consists in (1) the evacuation of the bursa through an incision not more than 3 cm. long and frequently less, and (2) the exploration of the musculotendinous rotator cuff of the shoulder through the floor of the bursa.

Various forms of treatment for the syndrome of acute subdeltoid bursitis with calcification have been reported in the literature. These may be classified under 3 general headings:

1. Conservative: rest, sedatives and opiates, and various local applications;[1,2] physical agents such as diathermy, iontophoresis and infra-red radiation;[3–10] the use of specific chemical agents including ammonium chloride,[11] iron cacodylate,[12–13] and neostigmine.[14]

2. Radiation: single or multiple dose technics.[15–27]

3. Operative: needling of the bursa with or without irrigation with various solutions of novocaine or saline;[28–34] surgical exploration and curettement of the bursa and rotator cuff of the shoulder.[35–46]

Some writers recommend conservative therapy before resort is had to operative means, whereas others follow a varied routine.[47–55]

All of the regimens described in the literature appear to give relief or cure in the majority of patients treated, the variable being the length of time before the effect is obtained. In fact, it has been stated[46] that acute subdeltoid bursitis with calcification will probably go on to cure even if untreated. However, the patient is usually in such severe pain and so completely disabled that he seeks the physician for immediate relief. Furthermore, the residua in the form of chronic shoulder pain and disability are important to the patient economically. Because of the rapid and permanent relief obtained with this method, it is felt that the operative treatment is the one of choice for this condition.

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Anatomy and Mechanics of the Bursa

A bursa is a self-lubricating sac interposed between 2 structures to facilitate motion between them. The subdeltoid (also called subacromial) bursa is somewhat complex in that proximally it lies under the coraco-acromial ligament and acromion process of the scapula and distally under the deltoid muscle. The floor of the bursa covers the upper and outer three-fourths inch of the greater tuberosity of the humerus, the bicipital groove, and the cuff formed by the tendons of insertion of the short rotator muscles of the shoulder, the supraspinatus, infraspinatus, teres minor and subscapularis. The floor of the bursa is so intimately applied to the rotator cuff that to all intents and purposes it is part of the cuff itself. The bursa does not connect with the shoulder joint except when the rotator cuff is torn through.

The bursa is generally held to be 1½ inches in diameter,[46] variations in size depending on the distention of the bursa with fluid and also on the various states of preservation encountered in cadaver preparations. Functionally it allows for smooth motion between the deltoid and the rotator muscles, thus facilitating the acts of abduction and rotation. The acromion process and the greater tuberosity of the humerus do not come into contact during the act of rotation. However, during abduction, the tuberosity slides up under the acromion process, thus bringing these 2 bony prominences into apposition as the arm is raised from the side. Skinner[56] holds that the supraspinatus muscle is concerned with the first stages of abduction (15–30°) and that the deltoid muscle supplements its action thereafter to complete the abduction. The other muscles of the cuff are concerned with rotation primarily.

Pathologic Considerations

It may be stated at the outset that the term "subdeltoid bursitis with calcification" is a misnomer. The consensus is that calcification rarely appears in the bursa as an isolated or initial finding. The calcific process begins in the tendons of the rotator cuff, principally the supraspinatus, and, if present at all in the bursa, occurs secondarily by rupturing through the floor of the bursa from the tendon underlying the floor. It has already been pointed out that the floor of the bursa is almost inseparably attached to the musculotendinous cuff.

Medical investigation into the pathologic anatomy of this condition is of recent origin. Although probably as old as the human race, the syndrome was first discussed at length by Duplay[57] in 1872 under the heading of scapulohumeral periarthritis. Considerable impetus to the study of calcified bursitis came with the discovery of the roentgen ray at the turn of the century. Since then, although many reports have appeared in the literature, the number of basic investigations into the pathogenesis of the disease have been relatively few. The variations in theory as to etiology are displayed by the variety of names, both popular and scientific, which have been applied to the condition: Duplay's disease (périarthrite scapulo-humérale), subdeltoid or subacromial bursitis, peritendinitis, neuritis, rheumatism, tendogenetic disease, peritendinitis calcarea, supraspinatus tendinitis, lime gout, bursitis, etc.

Briefly, present theory holds that an avascular tissue such as the supraspinatus tendon will develop necrosis and subsequent calcification either because of its own poor blood supply i. e., primarily, or when subjected to the wear and tear of continuous use and minor traumata Skinner's investigations[56] disclose that the supraspinatus tendon in infants is muscular up to its insertion into the greater tuberosity of the humerus. With advancing age the muscle becomes more tendinous, the cuff at the shoulder taking on an aponeurotic appearance. This fact would imply that the disease occurs in an older age group, and Rogers[58] corroborates this in a study of 100 cases of bursitis in which the average age was 48, no patient being under 30.

Sandstrom and Wahlgren[59] postulate that necrosis due to avascularity is the primary factor in the development of calcification. In a pathologic study of 12 cases with calcification, 8 occurring in the shoulder, they found marked vascular changes in the form of hypertrophy of the media of the vessels in the tendinous capsule and ligamentous tissue, with luminal narrowing and occlusion of small arteries and even thrombi in some of the vessels. They state that "on the basis of the pronounced vascular changes and of the marked alterative changes we assume the disease to consist of local tissue anemia with impairment of vitality. The lime deposits are secondary to these alterations." These conclusions are in line with the earlier work of Moschowitz[60] who noted extensive hyaline degeneration and necrosis in the tendinous tissue, with secondary calcification, the necrotic process being held to arise from actual death of the tendon.

The great volume of study, however, leans to the theory that calcification arising in the supraspinatus tendon is the result of trauma superimposed on an avascular tissue. Thus Hitzrot[61] believes that injury is the commonest cause of disease in this area. Relatively minor abuses such as wrenches and twists of the shoulder joints, blows upon the shoulder, falls upon the hand or arm with the arm in partial abduction, or overuse of the arm in abduction, may contribute to trauma of the rotator mechanism. Meyer[62, 63] has written at length about the wear and tear that the structures in the shoulder undergo from continuous use, the "hour to hour, day to day, month to month, year to year, and decade to decade effects."[63] He states that "the reparative powers of the structures concerned often are exceeded and that repeated slight trauma may provoke an obliterative endarteritis and sclerosis."[63]

Codman,[46] perhaps the outstanding authority in the field, has suggested that the calcification appearing first in the tendon and later rupturing into the bursa originates as the result of continued minor insults to the rotator muscles, particularly in occupations and avocations requiring continued abduction or rotation of the shoulder. Small traumata are produced in the tendon by impingement of the rotator cuff and the greater tuberosity of the humerus on the acromion process during abduction and rotation, the tendon becomes frayed, and the injury heals with calcification. That such tears of the supraspinatus tendon are more common than usually thought was brought out by Codman and Akerson[64] in a series of 52 autopsies at which 100 shoulders were examined. They found a total of 39 tears in all, impressive evidence of the frequency with which this tendon may be injured. However, Codman states that he has never seen a fresh tear as evidenced by bleeding or torn fibers in any of his acute bursitis cases. This opinion is substantiated by Carnett and Case,[39] who found no evidence of fresh injury in a series of 50 operative cases.

Carnett and Case[39] studied the tissue removed from 26 shoulders and have given an excellent description of the pathogenesis and histology of the lesion: "The sequence of changes in the tendon seems to be a primary interference with the blood supply, never very abundant, and then ischemia and necrosis result. In this necrotic tissue are deposited calcium salts which can be shown by X-ray examination. In many instances, but not in all, an inflammatory reaction is excited. As the nutrition of the tendon is impaired the fibers involved undergo hyaline degeneration and often break up into fragments of varying size. This necrosis may occur in a number of foci, and in the dead tissue calcium salts are deposited. In 1 case from 500 to 1,000 such deposits were found. This deposit varies from microscopic amounts to collections of considerable size. It is often soft and cheesy, resembling caseous necrosis; sometimes it is fluid or semifluid like pus; in other cases it is firm and brittle, necessitating decalcification before section. Cultures show it to be sterile." Chemical examination of the material shows it to be a mixture of calcium phosphate, carbonate and oxalate, with other minerals such as iron and magnesium present in minute amounts.

The microscopic findings vary from extensive granulations to a scattered infiltration of a few cells. Since the lesion is noninfectious, there are few polymorphonuclear leukocyctes. The lymphocyte, plasma cell and large monocyte predominate. In many instances foreign-body giant cells are found.

The theory that suppuration occurs in the bursa or that the bursa is the lodging place for bacteria from a distant focus of infection has been ruled out by many studies. Microscopic examination of the bursal contents consistently rules out abscess formation; cultures and smears of this material are negative for bacterial growth. In only 1 case in 450 did Patterson and Wilson[32] find evidence of infection. Others have consistently confirmed these results.

DIAGNOSIS

Two indications must be present for this operation to be performed successfully. The first is pain. Typically this is severe, located just distal to the acromion process, and frequently radiates down the arm to the fingers. It produces the characteristic disability of difficult or impossible abduction or internal rotation of the arm. Occasionally there is an associated history of exertion or strain bringing on the attack, but for the most part the onset is sudden and not related to any antecedent trauma. The patient will state that he was awakened from his sleep by the pain, or that it occurred while he was putting on his overcoat or driving his car.

Ferguson's description[65] of the patient with an attack of this disease is very graphic: "The pain is completely disabling; the arm is hugged to the side and cradled by the well arm, because any movement increases the severity of the pain. Sleep and rest are impossible for the sufferers; no position, sitting, standing or lying, seems to offer any relief; even relatively large doses of morphine give only temporary improvement. The pain is usually most acute over the greater tuberosity but also radiates down the arm and upward over the shoulder and lower neck. The region of the deltoid insertion is often described as the site of the most intense pain." Codman[46] has attributed this to a tonic spasm of the lower deltoid fibers. Haggart and Allen[38] term it a reflex spasm of the deltoid.

The second indication for operation is the roentgenologic demonstration of calcification in the shoulder region. The calcium will be deposited in varying degree, size, density and coalescence. It may be one huge mass, several moderately large groups, or a lot of small particles. From its relation to the greater tuberosity, it is often possible to determine whether the calcium is in the bursa or the tendon.[40] Certain features of the radiographic technic should be emphasized in order that the calcium may be brought into relief and not hidden by the head of the humerus. For one thing, at least 1 film should be taken with the arm in complete external rotation. Lewis[66] has recommended an oblique projection with the patient's shoulder against the cassette and the body at an angle of about 30 degrees. Bosworth[43] suggests fluoroscopy first, observing the shoulder through a full range of motion and taking spot films where deposits are seen.

The fact that calcification is present in the tendon does not necessarily mean that the patient has pain. Roentgenograms occasionally reveal the incidental presence of calcification in a patient presenting himself for another complaint. Thus Bosworth[43] found calcific deposits in 165 out of a total of 6,061 employees (2.7 per cent) on routine fluoroscopy of the shoulders, only a small minority of whom had complaints referable to this region. "Clinical symptoms may presumably occur at any stage of this pathologic process. On the other hand, there is ample evidence to prove that the entire process may progress to the extent of forming large deposits without giving rise to clinical symptoms."[39]

Ferguson[65] explains the pain mechanism as follows: "An area of calcification, usually in the tendon of the supraspinatus, suddenly becomes the seat of an acute inflammatory process which produces tension in the unyielding fibers of the tendon, an acute inflammatory reaction in the overlying bursa, and secondary spasm of the adjacent muscles."

OPERATION

The operative procedure is a simple one. It may be done under local anesthesia but preferably under intravenous sodium pentothal. The patient is in the anatomic position of palms facing anteriorly and the elbow joint of the affected side flexed to about 90° to facilitate rotation at the shoulder joint. A sandbag under the shoulder aids in this maneuver, although it is not absolutely necessary. After the operative site is painted and draped, the tendon of the long head of the biceps is palpated on the anterior surface of the shoulder and a vertical incision 2 to 3 cm. long is made in the skin just lateral to the tendon and 2.5 cm. below the tip of the acromion process. The deltoid fibers are carefully split and retracted until the roof of the bursa is exposed. The bursa may appear thin and shiny, or it may be thick and dull; it may be tense and distended, or appear collapsed; frequently a whitish appearance may indicate the presence of calcium.

The bursal roof is incised longitudinally and its contents evacuated or washed out with a Dakin syringe and saline. Occasionally 1 large mucoid glob may be present, or there may be a thick white material which has been likened to toothpaste. Gritty bits of calcium may likewise be found.

When the bursa has been emptied, the tendinous cuff of the short rotator muscles is inspected by manipulating the bent elbow so as to rotate the shoulder. In this way both the medially placed subscapularis and the laterally placed tendons are brought into view in turn without enlargement of the incision. If any part of the cuff contains calcium, it will be visible as a shiny plaque quite distinct from the tendon itself. A linear incision is made in the tendon over this plaque and in a direction parallel to the axis of the tendon fibers. This will cause the calcium to be extruded and the defect in the tendon may then be explored further by gentle curetting and irrigation with saline.

In closure, no attempt is made to suture any tendon fibers, bursa or deltoid muscle. One or two sutures of fine chromic catgut are placed through the fascia of the deltoid muscle, and the skin is closed in routine fashion. A small dressing completes the operation.

The patient is kept in the hospital for 24 hours. He is encouraged to move his arm as soon as he comfortably can, to eat by himself, and to comb his hair. On discharge he is instructed to carry out pendulum exercises frequently, using a weight or flatiron and allowing his arms to swing freely when he bends forward from the waist. The patient returns to work as soon as he wishes.

RESULTS

In a series of 38 cases there have been only 2 failures. Practically all of the patients have been able to move the arm fairly freely the next morning and begin the pendulum exercises without too great discomfort. There has been no postoperative morbidity or mortality. No cases of chronic disability or frozen shoulder have developed. The vast majority of these patients have been back at work after 3 or 4 days and have voluntarily expressed the opinion that the operation was satisfactory.

In accounting for the failures, the obvious reason probably was the failure to get rid of all the calcium. In 1 of these cases a second operation was performed the next day, and, as shown by a preliminary roentgenogram, a pocket of calcium was found on the extreme lateral aspect of the shoulder. This had been overlooked at the preceding operation and its removal was followed by marked relief.

SUMMARY AND CONCLUSIONS

1. The operative treatment of subdeltoid bursitis with calcification is advocated. An incision 3 cm. in length at most is employed.
2. The anatomy and mechanics of the bursa are described.
3. The theories as to pathogenesis of the disease are discussed.
4. The indications for operation are given.
5. The operation itself is reviewed in detail.
6. A series of 38 patients have been operated upon. Complete relief was obtained in 36. There were 2 failures, and in 1 of these a successful second operation was performed to evacuate a calcific deposit which had been missed previously.

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NEEDLE BIOPSY OF THE LIVER: ITS VALUE IN CLINICAL MEDICINE*

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IN THE past decade a great deal of interest has been focused on the study of liver disease. In the main the newer laboratory studies have given us better and simpler methods to learn the functional status of the liver. The cephalin flocculation, thymol turbidity and flocculation, the improved bromsulfalein (5 mg. per kg. of body weight) tests have aided considerably in this respect, although the mechanisms of their action remain only partially understood. The use of urine and fecal urobilinogen determinations, the various simplified methods of determining the presence of bilirubin in the urine, and the application of the 1-minute direct and total determination of serum bilirubin in accordance with the interpretations of Watson[1] have aided the understanding of the alteration of pigment metabolism in liver disease, especially in acute infectious hepatitis and its sequelae. By and large, however, these methods are limited in their usefulness in diagnosis by the nature of the varied disease processes of the liver which, though differing in etiology and pathogenesis, may give similar laboratory results. Study of table 1, taken from the illuminating article of Young,[2] reveals the interrelationships of various forms of jaundice and the great difficulty in diagnosis in a specific case on the basis of laboratory data alone. The correct diagnosis of liver disease can be of paramount importance in terms of a decision as to whether surgical intervention is indicated.

TABLE 1

Interrelations of Various Classifications of Jaundice[2]

Retention		
Due to:		
Excessive blood destruction	Hemolytic	Nonobstructive—Medical
Functionally subnormal liver cells	Hepatocellular	
Regurgitation		
Due to:		
Necrosis of liver cells		

Biliary Obstruction—Obstructive—Mechanical—Surgical

The appearance of the paper by Iversen and Roholm[3] in 1939 on aspiration biopsy of the liver and its diagnostic significance marks the advent of current interest in such histologic study of liver disease. It has been only in the past three or four years that the English and American literature have begun to indicate interest in this method of diagnosis of hepatic disease. The programs of the recent conventions of the American Gastroenterological Association and the American Medical Association reveal marked interest in this type of study.

Hoffbauer[4] has recently reviewed the historical background, the literature, the various technics, and the dangers and complications of liver biopsy. He has collected from the literature 1,120 biopsies in addition to which other series of cases, not yet published, were reported. In a discussion of some of the papers at the American

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Gastroenterological Association meeting this year the Gillmans reported that in their clinic 1,200 biopsies of the liver have been performed with but 1 fatality and that in a native patient for whom a hospital bed was unobtainable for several days after the complication of hemorrhage was diagnosed. Because of the peculiar social and economic status of South African natives, such a circumstance, while regrettable, is understandable. In the greater majority of patients the biopsy is done as a hospital procedure and the patient is kept under observation for as long as seems necessary.

CONTRIBUTIONS TO CLINICAL INVESTIGATION

Before discussing some of the results of the present study, it seems worth while to review some of the advances in the diagnosis and understanding of liver diseases that biopsy has made possible and its contributions to general medical knowledge. In no other way is it possible to study liver disease in such a dynamic fashion, since the various phases in a single patient are amenable to histologic study by serial biopsies. The correlation of tissue diagnosis and clinical study subsequently has obvious advantages over the usual method of clinical study and postmortem tissue diagnosis in clinical investigation. As will be shown, the demonstration histologically of transition of acute to chronic types of liver disease has important implications in altering our views relative to the management of certain types of cases. The use of this method, both experimentally and clinically, in determining the effects of various toxic substances on the liver, and the efficacy of various drugs in prophylaxis and treatment of liver injury, will eventually lead to more rational methods of therapy.

Roholm and Iversen[5] in 1939 delineated the pathology of the liver cells in acute, epidemic or infectious hepatitis as we now know it. At that time, these cases were usually diagnosed as catarrhal jaundice, implying, after Virchow, that the biliary passages and not the liver cell itself, bore the brunt of the pathologic process. Dible, McMichael, and Sherlock[6] confirmed the pathologic findings and began the elucidation of the hepatic pathology of serum jaundice or homologous serum hepatitis by biopsy studies. A recent review of the pathologic anatomy of epidemic hepatitis by Mallory[7] utilizing peritoneoscopic biopsies covers the fatal as well as nonfatal variety of the disease.

Krarup and Roholm[8] by means of serial biopsies in the same patients presented evidence in 12 cases of the development of cirrhosis following an attack of acute hepatitis. It is of interest to note that 4 of the patients were receiving arsenotherapy for syphilis before their attacks of jaundice, and in view of beliefs now current but not known at the time of the appearance of this paper these cases may have possibly represented homologous serum hepatitis rather than infectious hepatitis. It is interesting to note in this study that the time of development of histologically demonstrated cirrhosis, after the acute disease, in some of these cases was quite brief. This study is of considerable interest to all practitioners of medicine, since during World War II 170,000 cases of infectious hepatitis were reported in Army personnel alone.[9] This does not include the many cases of homologous serum hepatitis following parenteral introduction of serum containing yellow fever vaccine, and transfusions of plasma and whole blood. The implication that at least some of these veterans may develop chronic liver disease, or that a fertile background for the development of chronic liver disease exists, should be kept in mind.

That fully developed portal cirrhosis can occur as a result of acute infectious hepatitis is doubted by Lucke,[10] who points out that since both diseases are relatively common a history of a previous attack of "catarrhal jaundice" or infectious hepatitis in a patient with cirrhosis does not prove a causal relationship. Howard and Watson[11] have studied a series of patients, largely from rural communities and nonalcoholic, with cirrhosis. Since previous episodes of infectious hepatitis were found in a significantly greater proportion of patients with cirrhosis than in a similar group without hepatic disease, they believe this lends support to the concept that in certain cases hepatitis runs a chronic or recurrent course, ultimately leading to the clinical and pathologic picture of cirrhosis. Watson and Hoffbauer,[12] in a very provoking and careful study of the problem of prolonged hepatitis, present histologic and laboratory evidence indicating that, in some cases at least, a cholangiolitic hepatitis may develop and progress to a cholangiolitic cirrhosis. Anyone interested in this problem should read this profound paper.

There is, indeed, ample evidence in the literature that chronic disability may follow acute hepatitis, as recently indicated editorially.[13] Since Altschule and Gilligan[14] presented laboratory data indicating that 25 per cent of 36 patients who had attacks of infectious hepatitis 1 to 29 years previously demonstrated nonsymptomatic hepatic impairment, they feel that in rare cases it is the forerunner of cirrhosis. By use of liver biopsy and function tests Neefe[15] concluded that acute infectious hepatitis may be followed by a chronic nonicteric form of the disease that may persist for months and be responsible for continued incapacitating symptoms. A similar recent study by Kunkel, Labby, and Hoagland[16] of 350 patients who had infectious hepatitis revealed that 60 or 17 per cent had an abnormal convalescence. Eight patients or 2.3 per cent had not recovered completely after more than a year's time.

That the Veterans Administration is well aware of this problem is manifested by the recent announcement[17] that a research unit has been established to follow up various disease problems. Among the projects mentioned is the follow-up of a "pool of 60,000 veterans who picked up jaundice in the service." In this study, liver biopsy might well be a very useful method.

Bang and Wanscher[18] studied the histopathology of the liver in infectious mononucleosis complicated by jaundice. The changes in the liver in the 4 patients studied, all of whom recovered, were quite similar to those in acute infectious hepatitis, although there were less pronounced cellular and more severe interstitial changes. Jaundice occurs in 2 to 4 per cent of cases of infectious mononucleosis, but hepatic involvement without icterus is probably much more common. Recently DeMarsh and Alt[19] studied, by means of the cephalin flocculation and bromsulfalein tests, 19 cases of infectious mononucleosis without jaundice. In all there were varying degrees of hepatic dysfunction present. In 7 patients there was enlargement and tenderness of the liver. Van Beeck and Haex[20] did a liver biopsy in a case of infectious mononucleosis in which jaundice was not present. The histologic changes, although not pathognomonic, indicate involvement of the liver. It is hoped that more such cases will be studied by this technic.

Hoffbauer, Evans, and Watson[21] have studied cirrhosis of the liver by biopsy in an attempt to correlate functional studies with the histologic changes. Sherlock[22] evaluated various biochemical tests in acute hepatitis, cirrhosis, and obstructive jaundice by means of the liver biopsy technic. In all, 187 patients with liver disease were studied. She concluded that the most valuable and practical tests for the study of the jaundiced patient are serum bilirubin, alkaline phosphatase and differential protein estimations repeated at weekly intervals.

Hoffbauer and Spink[23] have secured liver biopsies in studying cases of proven brucellosis in the active stage. Multiple granulomatous lesions were found in the liver. Whether these lesions play a role in the pathogenesis of some cases of cirrhosis is not known.

The work of the Gillmans[24, 25] in South Africa is particularly noteworthy. As pointed out, they have had a tremendous experience with the technic of liver biopsy and pay tribute to it as the only possible way to study the histologic changes of the liver in various conditions during life safely and accurately. Biochemical and fluorescent microscopic studies of biopsy specimens have been done as well as the routine histologic study. They have studied 120 patients with pellagra and have found that the fatty liver is as constant a feature in the infantile pellagra syndrome as the rash or edema and develops early in the disease prior to onset of the known complications.

In the adult cases of pellagra liver biopsy studies have enabled the authors to claim that cirrhosis of the liver in man can be produced by dietetic imbalance. A rather surprising finding of the Gillmans is the fact that hemochromatosis is a common sequel of pellagra, at least in South African natives. These claims are substantiated by a wealth of histologic material splendidly studied and presented. In their material pigmentary cirrhosis occurred in 15 per cent of pellagrous adults. The high incidence of cirrhosis and primary carcinoma of the liver in the native South African population has also been shown by Berman[26] who found that of 292 patients with carcinoma of an organ other than the liver the carcinoma originated in the liver in 90.5 per cent of the cases. The Gillmans diagnosed 16 cases of primary carcinoma of the liver by biopsy in a 2-year period. In these studies, conducted in an impoverished and poorly nourished population, fatty infiltration, cirrhosis, excess deposition of iron pigment, and carcinoma of the liver are found singly or in various combinations frequently.

It is known that just as every fatty liver does not necessarily become cirrhotic, every liver with excess iron pigment does not become cirrhotic. Although livers containing excess iron pigment and excess fat seem to be more liable to undergo cirrhotic changes, this does not imply that the accumulation of fat or iron is the cause of the cirrhosis. From the evidence the Gillmans present, they conclude that it is apparent that fatty liver, excess iron pigment with and without cirrhosis, and carcinoma of the liver are not consecutive events in the progression of hepatic pathology but represent different patterns of reaction of the liver to a chronically poor dietary status.

The Gillmans wish to abandon the term hemochromatosis as currently used, since it not only implies that the iron pigment is derived from hemoglobin but also that cirrhosis is an inevitable consequence. The failure to demonstrate any evidence of increased destruction of erythrocytes in hemochromatosis casts some doubt on the validity of the idea that the iron pigment is derived from red cells. The Gillmans, by using the biopsy method for histologic and biochemical study, have advanced data showing that the iron pigment arises within the liver cells as the result of a profound disturbance of intracellular metabolism induced by dietary imbalance. The iron pigment is believed to be a product of the mitochondria. They suggest the term cytosiderosis to replace hemochromatosis as coming closer to more accurately reflecting the true pathologic process. Further, they believe that cytosiderosis (hemochromatosis) is not the result of an inborn error of metabolism[27] but is one of the manifestations of chronic malnutrition. With the excess formation of iron pigment in the liver, iron is excreted into the bowel where it is absorbed to enter the lymphatics and to pass into the systemic circulation, thus causing the widespread infiltration of skin, pancreas, and nervous system present in some cases.

METHODS AND EVALUATION

In our studies with liver biopsy the Vim-Silverman biopsy needle has been used. This is a needle biopsy method rather than a punch or aspiration biopsy technic, methods now in use by other workers with good results. Some modifications have been made. Two sizes of the needle are available, short and long. Because of technical difficulty with the short set, the long inner split needle within the short 14-gauge outer needle, which has a hypodermic bevel tip, is preferable. The outer needle with stylet in place is 9.6 cm. long, and the inner split needle measures 14 cm., giving a maximum free needle biopsy length of 4.4 cm. However, the maximum length of the needle is introduced very infrequently into the liver. I have not abandoned the use of the stylet, as has Hoffbauer,[4] since it is quite useful in introducing the needle through the abdominal wall without requiring the use of a small skin incision after local anesthetic infiltration. The inner-split needle has been found to lose sharpness and flexibility after about 25 biopsies and should be replaced. The procedure is performed at the bedside or in an examining room, aseptic technic and sterile equipment being used. If the patient is thought to be especially nervous, a mild sedative may be given 30 minutes prior to biopsy, but this has been necessary infrequently.

After infiltration of skin and tissue down to the peritoneal surface with procaine, the needle with stylet is passed into the liver, the stylet removed, and the inner split needle inserted. Without rotation, which increases the likelihood of hemorrhage, the outer needle is advanced over the inner needle, thus acting as a cutting edge trapping the tissue between the 2 prongs of the inner split needle. The inner needle is then removed and if tissue satisfactory for biopsy is obtained, the outer needle is also removed. Otherwise, in most cases, another attempt to get a satisfactory biopsy is made. The whole procedure after local infiltration takes from 2 to 5 minutes in most instances.

In most cases a palpable liver is present. The anterior abdominal approach, to the right of the midline and subcostally, is probably the safest and lends itself to greater facility in cases of hepatomegaly than the intercostal approach advocated by Iversen and Roholm.[3] In cases in which the liver is either not enlarged or only questionably so I have used the intercostal approach and have found quite satisfactory results obtainable with the Vim-Silverman needle as used above.

The procedure is limited to hospitalized patients who have had a complete workup, including liver function studies. A prothrombin time is done within 72 hours of the procedure, and if it is low, 1 or 2 ampules of a vitamin K preparation are given intravenously 24 hours prior to biopsy. The hematologic status has usually been obtained, since a dyscrasia affecting clotting or bleeding time may be a contraindication. I do not feel that there is any special danger as to bleeding if the prothrombin time is 50 per cent or more of normal.

The patients selected for this procedure are those who have definite or suspected clinical or laboratory evidence of liver disease. Many of these have a palpably enlarged liver with an indefinite or obscure diagnosis. In cases of jaundice in which the etiology is in doubt this uncertainty may be resolved by this method.

Volwiler and Jones[28] report 235 needle biopsies with 0.5 per cent mortality. In this important paper the authors substantiate the contribution of this method in correct differentiation of extrahepatic and intrahepatic biliary obstruction when clinical and laboratory data are inconclusive; exact diagnosis of the type of diffuse intrahepatic disease; determination of the particular phase of a known subacute or chronic hepatitis; indications for therapy not obtainable from complete clinical and laboratory examinations; and accurate evaluation of therapeutic regimens in chronic liver disease.

The diagnosis of various infiltrative types of disease, as amyloidosis and carcinoma, either primary or secondary, may occasionally be made. In those cases in which carcinoma, either primary or secondary, is suspected, or in which nodules are believed present, liver biopsy has definite limitations. To obtain a piece of a carcinomatous nodule may not be possible by this method, although in the present study, as well as in others,[3,24,29,30] the diagnosis is made not infrequently. In this instance, however, peritoneoscopy affords a more certain chance of diagnosis, since the metastatic nodules, if present, can be seen and biopsy specimens obtained under visual guidance. Since peritoneoscopy is a more formidable and expensive procedure than bedside needle biopsy, the latter procedure should be attempted first, and if normal tissue is obtained after 1 or 2 biopsies, peritoneoscopy should then be done. Benedict[31] has shown how important a role in the diagnosis of liver disease peritoneoscopy may play. In 435 patients peritoneoscopy was performed primarily to study the liver in two thirds of the cases. In 260 cases a definite histologic diagnosis of liver disease was made, including 170 cases of metastatic carcinoma, 5 of primary carcinoma, and 73 cases of cirrhosis. Benedict also indicates how difficult from a clinical point of view the differential diagnosis of cirrhosis and carcinoma of the liver may be, especially when ascites is present. On clinical grounds, one diagnosis may be made, whereas liver biopsy may reveal the other condition to be present with histologic certainty. In terms of prognosis alone this procedure is warranted in such cases. It is my belief that the use of the needle or aspiration biopsy methods will establish the diagnosis, so that peritoneoscopy will be resorted to less frequently in a good portion of this particular type of case. Hoffbauer[4] has recommended the combined use of peritoneoscopy and needle biopsy in certain types of cases. The peritoneoscopic biopsy is limited to the capsular and subcapsular area where the lesion may not be well defined, whereas the specimen in needle biopsy is obtained from an area well below the capsule and gives an accurate histologic sample of diffuse hepatic processes.

From the pathologist's point of view, in a properly obtained specimen, the cytology is superior to that usually obtained at autopsy, because the specimen is obtained from a living organism and fixed with a minimum of autolysis. The observation of liver disease at intervals during life in elucidating pathogenesis has been mentioned. There are, too, decided disadvantages. Cytology and structure may be distorted by pressure and manipulation in performing the procedure. Lesions may be focal in many diseases affecting the liver and may be missed by examination of the limited material available. The usual specimen is 1 to 3 cm. long and 1 to 2 mm. in width. In this respect the correlation of autopsy and biopsy diagnosis reported by Davis, Scott, and Lund[29] is quite interesting.

In my cases the tissue obtained was immediately placed in fresh 10 per cent formalin, as directed by the Mallory Institute of Pathology, Boston City Hospital, where the pathologic studies were made. In some instances stains in addition to the routine one were possible with the specimens of tissue. A surprising number of fields could be seen for microscopic study in most cases.

COMPLICATIONS

Roholm, Krarup, and Iversen[32] list as possible complications following liver biopsy pain, damage to neighboring organs, implantation of tumor cells in the needle track, air embolism, infection, bile peritonitis, and hemorrhage. In the experience of most, pain following the procedure is usually localized over the area of entry of the needle and does not last for more than a day or two, occurring in about 5 per cent of the patients. With the intercostal approach occasionally pain in the right shoulder is felt. This is due to pleural irritation, since with this approach the needle passes through the pleural cavity and diaphragm before entering the liver. Mild analgesic drugs, such as aspirin and occasionally codeine, are sufficient to control the pain.

Careful technic in each case will obviate the next 5 complications listed. Unavoidable circumstances such as transposition of the colon between the liver and the abdominal wall or an anomalously placed gallbladder may eventuate in rare perforations.

However, the only serious complication really is hemorrhage. Of the 1,120 biopsies compiled by Hoffbauer[4] 12 deaths have occurred. This includes various methods of procedure by many operators. Not included in the total number of biopsies are the 700 additional by the Gillmans, 80 by Hoffbauer,[30] 100 by Davis, Scott and Lund,[29] my series, and other series not yet reported, in all of which there were no fatalities. Hoffbauer,[4] in using combined peritoneoscopy and needle biopsy, was able to observe that the amount of blood escaping from the puncture wound of the liver is not great. It seldom lasted more than 30 to 60 seconds and consisted of a slow trickle of blood down the surface of the liver. In cases of chronic passive congestion of the liver bleeding was noted to be more profuse but not alarming.

I have thought of the possibility of routinely injecting by syringe through the outer needle, after removal of the inner needle, solutions of thrombin or small amounts of a soluble cellulose substance (Oxycel) as has been done in experimental peritoneoscopic liver biopsy studies in dogs by Hoffbauer, Ducci and Emmons.[33] Since I have not encountered serious hemorrhage in any attempts at needle biopsy, I have not used these coagulants, which are now widely utilized in certain types of surgery. Nevertheless, there seems to be a definite degree of danger inherent in the procedure. Iversen[3] places the fatality rate below 0.5 per cent. Since some risk is involved, it is felt that the procedure should only be done in a hospital where adequate facilities for transfusion and surgical intervention are at hand.

RESULTS

In a recent 1-year period 42 biopsies have been done in 37 patients. In 5 patients biopsy was done twice, and in 2 of these the first biopsy was unsatisfactory. In another 2 histologic diagnosis remained the same, and in the remaining case both attempts at biopsy were unavailing. In 5 cases in which 1 needle biopsy was attempted the tissue obtained was unsatisfactory for definitive histologic study. These should have been repeated. A total of 6 failures in the 37 patients resulted. These failures were considered mainly caused by overuse of the inner split needle, which should be replaced after approximately 25 biopsies but was not done in this series.

Table 2 lists the histologic diagnosis in 31 cases and compares each with the clinical diagnosis. The autopsy results were available in 6 of the 7 patients that died during their hospitalization.

A striking feature of the results is the preponderance of cirrhosis and fatty metamorphosis. In 18 of the 31 patients the histologic diagnosis of cirrhosis of one type or another was made 14 times, and the diagnosis of fatty metamorphosis 4 times. The terminology of the types of cirrhosis is that currently used at the Mallory Institute of Pathology, Boston City Hospital. The type of cirrhosis called "alcoholic" is characterized microscopically by marked fat vacuolization, necrobiotic liver cells, and characteristic hyaline degeneration, as outlined by Mallory.[34] The term is retained despite the fact that alcohol, per se, is not believed to be the direct cause of the liver injury but plays an intermediate role in the usual background of acute and chronic nutritional deficiencies, especially of protein, commonly found in these cases. A most surprising feature was the definite diagnosis of pigment cirrhosis in 3 cases and its probable diagnosis in another. The tissue in these 4 cases was studied with special iron stains after routinely stained tissue was examined. In most of these 18 cases there was a history of chronic alcoholism, and in a few cases only moderate alcoholism was admitted.

The preponderance of this type of case is probably explained by the hospital population in which there is a sizable proportion of alcoholic addicts. Additionally, a good deal of the patient material was derived from a special ward for acutely and chronically alcoholic patients.

However, there is here a striking similarity to the material presented by the Gillmans,[24, 25] as outlined previously. These alcoholic patients are the nutritional counterparts of the malnourished South African native. The presence of fatty metamorphosis, cirrhosis, and cyto-

TABLE 2

Results of Histologic Study of Liver Biopsy of 31 Patients

HISTOLOGIC DIAGNOSIS	NO. OF CASES	CLINICAL DIAGNOSIS	AUTOPSY
Cirrhosis, etiology undetermined	3	Alcoholic cirrhosis	
		Alcoholic cirrhosis	
		Alcoholic cirrhosis	
Pigment cirrhosis	3	Rheumatic heart disease and congestive heart failure; ? cardiac or alcoholic cirrhosis	
		Alcoholic cirrhosis with necrosis	Not obtained
		Fatty metamorphosis	
Alcoholic cirrhosis	4	Alcoholic cirrhosis	Alcoholic cirrhosis
		Alcoholic cirrhosis	Alcoholic cirrhosis
		Alcoholic cirrhosis with necrosis	
		? Alcoholic cirrhosis ? Acquired hemolytic anemia	
Alcoholic cirrhosis with fatty metamorphosis	3	Alcoholic cirrhosis with fatty metamorphosis	
		Diabetes mellitus ? Metastatic carcinoma ? Hemachromatosis	
		Fatty metamorphosis	
Alcoholic cirrhosis with hemosiderosis (? pigment cirrhosis)	1	? Hepatitis and pernicious anemia	
Fatty metamorphosis	4	Fatty infiltration of liver; ? alcoholic cirrhosis	
		Brain fracture and cerebral hemorrhage; ? fatty infiltration of liver	Brain fracture and cerebral hemorrhage, fatty metamorphosis of liver
		? Alcoholic cirrhosis	
		Primary cerebellar degeneration, fatty infiltration of liver	
Pericholangitis with bile stasis	1	Infectious hepatitis	
Normal liver	4	Hodgkin's disease (pulmonary and mesenteric); tuberculosis	
		Amyotrophic lateral sclerosis; ? cirrhosis	
		Diabetes mellitus, hepatomegaly	
		Fatty metamorphosis	
Metastatic melanocarcinoma	1	Malignant melanocarcinoma with metastasis to the liver	
Liver tissue with focus of acute inflammation consistent with liver abscess	1	? metastatic carcinoma	
Necrotic tissue strongly suggestive of metastatic carcinoma	1	Metastatic carcinoma	
Metastatic carcinoma	1	Carcinoma of breast with hepatic metastasis	Carcinomatosis secondary to carcinoma of breast
Abnormal liver structure	1	Wilson's disease	
Cardiac cirrhosis	1	Rheumatic heart disease with congestive heart failure and hepatomegaly; ? cardiac cirrhosis	
Hemosiderosis	1	Pernicious anemia	Pernicious anemia; hemosiderosis of the liver
Periportal lymphocytic infiltration consistent with lymphocytic leukemia, and hemosiderosis	1	Lymphatic leukemia	Lymphatic leukemia with marked hepatic infiltration

siderosis in the livers of this group is quite similar to that of the Gillmans. Furthermore, it supports their belief that disburbance of iron metabolism of the liver is a product of nutritional deficiency rather than an inborn metabolic error. Another feature of the 3 cases diagnosed definitely as pigment cirrhosis was the absence of pigmentation of the skin and dysfunction of carbohydrate metabolism so closely associated classically with cytosiderosis (hemochromatosis). One of these patients died before the biopsy diagnosis was known, and unfortunately autopsy permission was not granted. Another of the patients signed out against advice prior to return of biopsy diagnosis, since he felt perfectly well after recovery from a bout of acute alcoholism. The third definite case was studied quite carefully, but no signs were uncovered other than the large liver which clinically was thought to be due to alcoholic, or possibly cardiac, cirrhosis, since the patient, in addition to being a chronic alcoholic, also had rheumatic heart disease with chronic congestive failure. It would appear that pigment cirrhosis occurs more frequently than can be diagnosed by clinical means. Here again needle biopsy affords information of considerable importance that is obtainable in no other manner.

Autopsy was obtained on 6 of the 7 patients who died during their hospitalization. In all of the autopsied cases there was no change in diagnosis as obtained by liver biopsy. In 3 cases diagnosed definitely as hepatic metastatic malignancy histologic confirmation was obtained. In another patient, a 72-year-old white female, from whom a coherent history was unobtainable, metastatic carcinoma was thought to be one of the diagnostic possibilities. On performing needle biopsy by the intercostal approach, after removal of the stylet thin yellowish fluid flowed from the outer needle. On examination, many polymorphonuclear leukocytes were found to be present in the fluid. Tissue was obtained, and the histologic report was consistent with the diagnosis of liver abscess. The patient experienced no ill effects from liver biopsy and eventually recovered. In 1 case, not listed in table 2, since no tissue was obtained there was deep jaundice and a small liver in a female of 68. At the time of biopsy ascites was not clinically evident, but by the intercostal approach ascitic fluid was obtained. Two days later clinical evidences of ascites appeared. As suspected clinically, postmortem examination revealed subacute yellow atrophy.

A case each of amyotrophic lateral sclerosis, primary cerebellar degeneration, and hepatolenticular degeneration was studied with the Nerve Service. In the case of Wilson's disease or hepatolenticular degeneration the detailed histologic examination of the liver biopsy and the unique biochemical findings present in this patient are the subject of a forthcoming report by Uzman and Denny-Brown.[35]

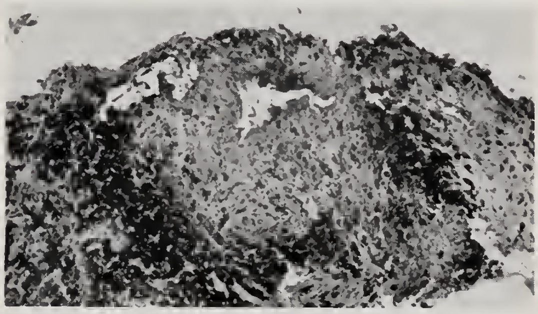
FIG. 1. Case 1. Metastatic melanocarcinoma (× 10)

A few brief case reports will demonstrate some of the specific points resolved by liver biopsy and the type of case in which this procedure is indicated.

ILLUSTRATIVE CASES

Case 1. A 29-year-old white woman had a mole removed from her back after the delivery of a normal child 3 months prior to admission. Two months before admission anorexia, weakness, and tenderness in the right upper quadrant were noted. On physical examination a nodular liver reaching to the iliac crest was palpated. The clinical diagnosis was metastatic melanocarcinoma, and the liver biopsy showed the same (fig. 1).

Case 2. A 64-year-old white man entered as the result of an alcoholic spree. Twenty-four hours after admission he had had no symptoms and felt perfectly well. Physical examination revealed the liver edge to be palpable 5 cm. below the right costal margin. The clinical diagnosis was fatty metamorphosis of the liver. The diagnosis of the liver biopsy was pigment cirrhosis (fig. 2).

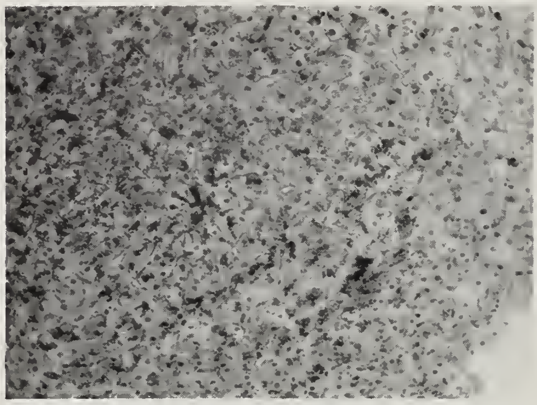

Fig. 2. Case 2. Pigment cirrhosis (hemochromatosis), iron stain (× 40).

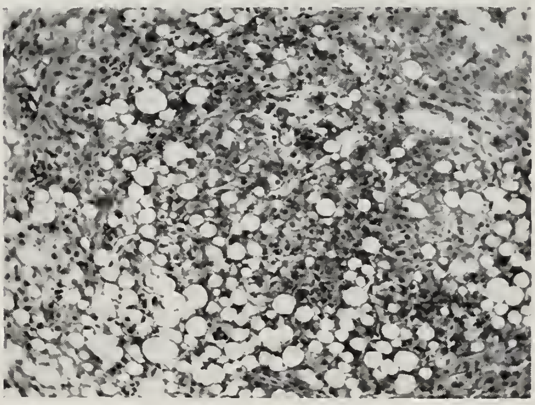

Fig. 3. Case 3. Early cirrhosis, alcoholic type (× 40)

Case 3. A 54-year-old white woman entered the hospital because of abdominal enlargement and pain in the left upper quadrant. She admitted a moderate alcoholic intake in the past few years. Physical examination revealed a distended abdomen, questionable presence of ascites, and a spleen palpable 2 cm. below the left costal margin. The liver was not palpable. Bromsulfalein and cephalin flocculation tests were negative. Abdominal paracentesis was done but no fluid was obtained. The clinical diagnosis was ? cirrhosis or ? acquired hemolytic anemia. The diagnosis of the liver biopsy was early cirrhosis, alcoholic type (fig. 3).

Case 4. A 32-year-old white woman entered the hospital because of deep jaundice, anorexia, and weakness. There had been a heavy alcoholic intake with poor dietary in the past 2 years. Physical examination revealed deep jaundice, hepatosplenomegaly, ascites, spider angiomata, and edema of the legs. A biopsy was obtained prior to and after intensive therapy, but the patient died in hepatic coma 3 weeks after admission. Both liver biopsies were the same. The clinical diagnosis was alcoholic cirrhosis with acute hepatocellular necrosis. The liver biopsy showed alcoholic cirrhosis (fig. 4).

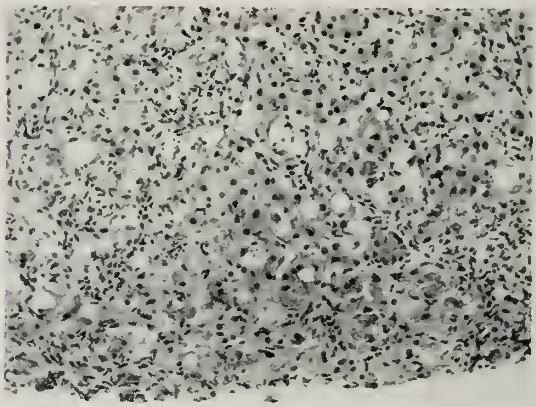

Fig. 4. Case 4. Alcoholic cirrhosis, acute (× 40)

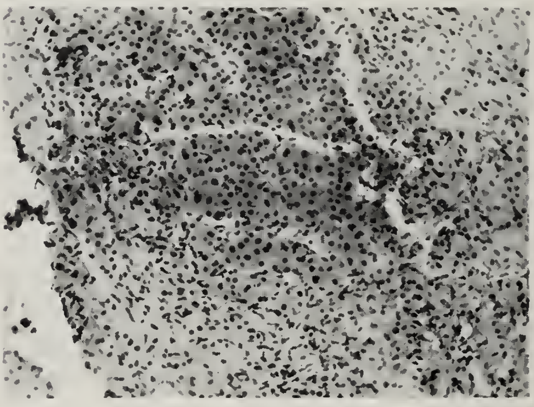

Fig. 5. Case 5. Cardiac cirrhosis (× 40)

Case 5. A 50-year-old white woman entered the hospital because of shortness of breath and swelling of the ankles. She was a known cardiac, having had rheumatic heart disease for many years. There were râles at both lung bases, edema of the ankles, mitral stenosis and regurgitation, auricular fibrillation, and a liver edge palpable 5 cm. below the right costal margin. The clinical diagnosis was cardiac cirrhosis and rheumatic heart disease with congestive failure. Diagnosis of the liver biopsy was cardiac cirrhosis (fig. 5).

Case 6. A 38-year-old white woman entered the hospital because of jaundice, weakness, and loss of weight. A year prior to admission a right radical mastectomy had been performed for carcinoma of the breast. Physical examination revealed an emaciated, jaundiced female. A nodular liver was palpated, the edge reaching 6 cm. below the right costal margin. The clinical diagnosis was carcinoma of the breast with hepatic metastasis. The liver biopsy showed metastatic carcinoma (fig. 6).

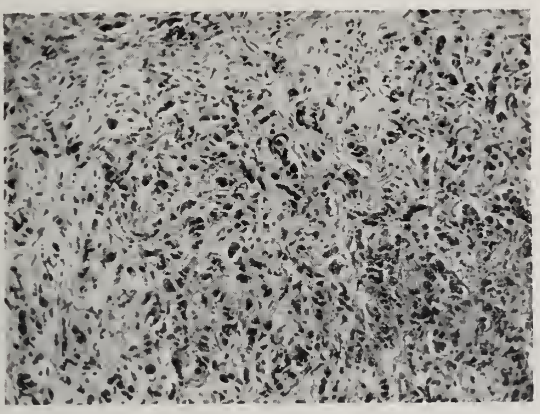

FIG. 6. Case 6. Metastatic scirrhous carcinoma (× 40)

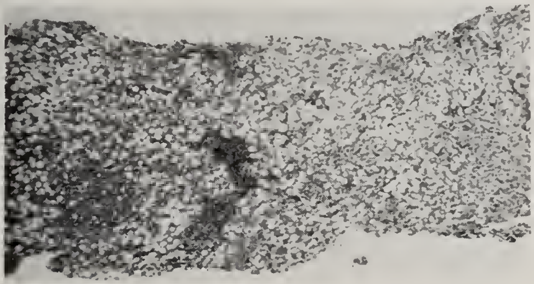

FIG. 7. Case 7. Fatty metamorphosis (× 10)

Case 7. A 44-year-old white man entered the hospital because of inability to walk. Cerebellar signs were present in the lower extremities, and after study on the Nerve Service, including encephalography, a diagnosis of primary cerebellar degeneration was made. The patient admitted a heavy alcoholic intake for the past few years. There was an enlarged liver palpable 4 cm. below the right costal margin. The clinical diagnosis was primary cerebellar degeneration and fatty infiltration of liver. Liver biopsy showed fatty metamorphosis (fig. 7).

Case 8. A 62-year-old white man entered the hospital because of weakness, anorexia and weight loss of 3 months' duration. Jaundice had been noted 2 weeks prior to entry. The liver was felt 3 cm. below the right costal margin. The leukocyte count was 279,000 per cu. mm., and the smear showed 97 per cent of the cells to be lymphocytes. The platelet count was 31,000, and the bleeding time was 10 minutes. The patient was irrational and moribund at the time of biopsy. Shortly after this was performed the patient was found on the floor, and examination revealed him to be in shock. Death ensued 45 minutes after the biopsy was performed. At necropsy several hours later the clinical diagnosis was confirmed. Partial obstruction of the common bile duct by enlarged lymph nodes, the result of leukemic infiltration, was present. There was a moderate amount of blood-tinged fluid in the peritoneal cavity. The biopsy wound was found in the left lobe of the liver, 2 inches above the anterior edge. There was a small amount of clotted blood over the left lobe of the liver. The biopsy wound extended into the liver for a distance of 4 cm. and was clean with no obvious hemorrhage. It was not felt that the liver biopsy was contributory to the patient's death. It is quite possible that the combination of the hemorrhagic state, the liver biopsy, and the trauma of the fall from bed may have led to excess bleeding. The clinical diagnosis was chronic lymphatic leukemia. The liver biopsy showed periportal lymphocytic infiltration consistent with lymphocytic leukemia and hemosiderosis (fig. 8).

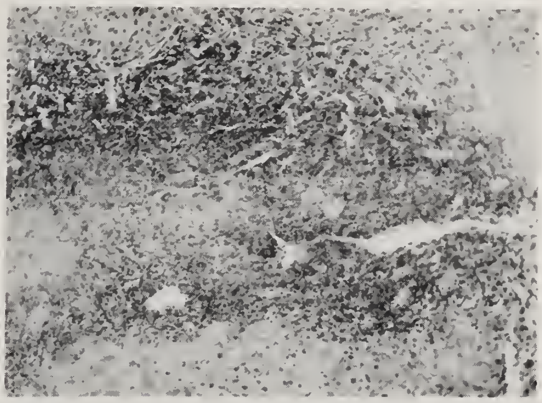

FIG. 8. Case 8. Periportal lymphocytic infiltration consistent with lymphocytic leukemia, and hemosiderosis (× 40).

SUMMARY

The technic, use, indications, limitations, and complications of liver biopsy have been discussed. The contributions to the general basic knowledge and the specific pathogenesis of various types of liver disease made possible by this method have been presented.

Emphasis has been placed on the varied effects of chronic malnutrition on the liver as demonstrable by serial liver biopsy. The occurrence of fatty metamorphosis, cirrhosis and cytosiderosis (hemochromatosis), singly and in combination, in the common background of malnutrition in South Africa and chronic alcoholism in Boston is demonstrated.

Cytosiderosis (hemochromatosis) is believed to be histologically present in some cases in the absence of the classical signs and symptoms. It probably occurs more frequently than has been thought in the past.

Case presentations with histologic sections have been given to illustrate the utilization of needle biopsy in clinical medicine. A series of 42 liver biopsies in 37 patients has been analyzed, and the correlation of clinical, autopsy, and biopsy diagnoses shown.

Acknowledgement and appreciation for the availability of the patients are made to Dr. John A. Foley, Director, and Dr. Kermit Katz, Assistant Director, of the Fifth and Sixth Medical Services, and to Dr. John A. Rattigan, Chief Physician, Fifth Medical Service, all at Boston City Hospital, Boston, Mass.

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THE USE OF A VAGINAL CREAM CONTAINING 9-AMINOACRIDINE IN THE TREATMENT OF MYCOTIC VAGINITIS*

Preliminary Report

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VAGINITIS, both specific and nonspecific in nature, provides a situation which is annoying to the patient and frequently baffling to the physician. The advent of pregnancy increases the frequency of occurrence and the severity of the symptoms, and also renders ineffectual many of the routine types of therapy.

Early in 1947 we began to use a vaginal cream, composed of an acridine derivative, 9-aminoacridine (1:500), allantoin 2 per cent, sulfanilamide 15 per cent, and lactose 5 per cent in a greaseless base buffered to a pH 4.5 with lactic acid, in the treatment of vulvovaginal mycoses due to *Candida albicans*.

Although this work is not complete, a preliminary note is presented at this time in the hope that further work may be stimulated from other quarters.

MATERIALS AND METHODS

Twenty-five women seen by 5 different individuals as private patients were treated with the experimental material, i.e., 0.2 per cent 9-aminoacridine in the allantoin, lactose and sulfanilamide base (experimental cream). In control group I, 4 pregnant and 2 nonpregnant women were treated with the cream base alone. Six patients were treated with allantoin, lactose and sulfanilamide buffered cream base in the absence of the acridine dye (control group II). Approximately one-half of all these patients were pregnant in all series. Controls were run by physicians other than those utilizing the experimental cream, and it is therefore reasonable to assume that no selection of cases was possible.

All patients when first seen were evaluated clinically and the extent of the lesion summarized. The diagnosis was verified by smear or culture in approximately 60 per cent of the patients.

RESULTS

Because of the recognized difficulty of curing any vaginal infection during pregnancy the patients were divided into 2 groups in each series, pregnant and nonpregnant. In the experimental series of 25 patients, 15 women were pregnant. In control group I, those in whom the cream base was used, 4 women were pregnant, and in control group II only 2 were pregnant.

In the group of pregnant women receiving the experimental cream 11 were symptomatically cured and 5 were eradicated of the disease, as evidenced by negative smear; 4 were unchanged symptomatically and 7 were not cured (table 1).

In control group I, those in whom the cream base was used, symptomatic cure resulted in 2 cases, but in no instance did the smear become negative in the pregnant woman.

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TABLE 1

Summary of the Findings in the Experimental and Control Groups

GROUP	NUMBER OF PATIENTS	SYMPTOMS			SMEAR		
		Cure	Same	Worse	Cure	Same	Worse
Experimental							
Pregnant	15	11	3	1	5	7	0
Nonpregnant	10	8	2	0	6	2	0
Control I							
Pregnant	4	2	2	0	0	4	0
Nonpregnant	2	0	2	0	0	2	0
Control II							
Pregnant	2	0	0	2	0	2	0
Nonpregnant	4	0	2	2	0	4	0

In control group II, receiving the allantoin, sulfanilamide and lactose in the acid base, neither of the 2 pregnant women received even syptomatic relief, although no extension of the lesion was noted in either case.

Approximately the same general pattern was followed by the nonpregnant group, although the cure rate was definitely higher.

Eight of the 10 nonpregnant patients treated with the experimental cream obtained a symptomatic cure, and 6 of the 10 received bacteriologic cures.

The symptomatology was not changed in control group I (acid base alone) nor was the mycology. In control group II (allantoin, sulfonamide and lactose cream), 2 of the 4 patients stated that they had no symptomatic relief, and in none of these did the smears become negative.

One patient became sensitive to the drug in less than 1 week of use and another type of therapy had to be utilized.

Discussion

The search for suitable therapeutic agents in the treatment of vaginal moniliasis has been long and unsatisfactory. Until 1945, when Alter, Jones and Carter[1] introduced propionates, there were many specific and nonspecific remedies advocated, but all were inferior to gentian violet. This is therapeutically active but has many drawbacks, e.g., it is disfiguring to the patient and contacts, it requires frequent office visits, and sensitivity reactions are not infrequent.

Parks[2] reported on the effectiveness of allantoin 2 per cent, sulfanilamide 15 per cent, and lactose 5 per cent in a greaseless base buffered to a pH of 4.5 with lactic acid in the treatment of surface infections of the exocervix, vagina and vulva, but found it noneffective in vulvovaginal mycoses. Smith[3] treated nonspecific infections of the vaginal tract; Angelucci[4] reported 84.6 per cent permanent cures in her series of Trichomonas vaginitis cases; and the Horoschaks[5] stated that "the cream proved to be the most effective treatment of endocervicitis we have found for this condition."

Our own clinical results with the cream, introduced by Parks, have been satisfactory except in mycotic vaginitis, wherein it was found to be practically noneffective.

The use of 9-aminoacridine (1:500), allantoin 2 per cent, sulfanilamide 15 per cent, and lactose 5 per cent in a greaseless base buffered to a pH 4.5 with lactic acid, has provided a satisfactory method of treating vulvovaginitis due to *Candida albicans* in both the pregnant and the nonpregnant woman.

By combining this therapy with bi-weekly douches of water or normal saline, sitz baths and reasonable hygiene, it has been found possible during pregnancy to keep most patients infected with this organism reasonably comfortable, and most of those who cannot be cured entirely during pregnancy may be expected to respond postpartum with continuation of this therapy.

It is of interest that a simple acid cream will effect a symptomatic cure in approximately half of these patients although the organism will not disappear from the vagina with this therapy.

(*Continued on page 427*)

NITROGEN MUSTARD THERAPY OF LYMPHOSARCOMA

Report of a Case

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STUDIES of the nitrogen mustards have revealed a chemical agent that exerts its greatest effect on rapidly growing tissue, either normal or neoplastic.[1] This finding, together with the selective action of the nitrogen mustard on lymphoid tissue, has suggested the use of these compounds in the treatment of neoplastic diseases of lymphoid tissue.[2]

Clinical experimentation with nitrogen mustard has produced satisfactory responses in the treatment of lymphosarcoma, even in radiation-resistant patients. Therapeutically induced remissions with the drug have been characterized by the complete clinical dissolution of lymphosarcoma masses associated with alleviation of symptoms, and improvement in appetite, strength and weight.[3]

The outstanding toxic effect of the drug is its damage to normal hematopoietic function, which may progress to a complete aplasia of the hematopoietic elements of the bone marrow.[4]

Cutaneous lesions are relatively uncommon in lymphosarcoma. Primary lymphosarcoma of the skin is rather rare but may occur as solitary or multiple nodules or as an exfoliative dermatitis or erythroderma.[5] Sugarbaker and Craver[5] have reported metastasis to the skin from lymphosarcoma arising in lymph nodes and other organs of the body in 5.5 per cent of a large series of cases studied.

In the following case the patient's primary clinical manifestations of lymphosarcoma were multiple nodules of the extremities and subsequent symptoms of visceral involvement.

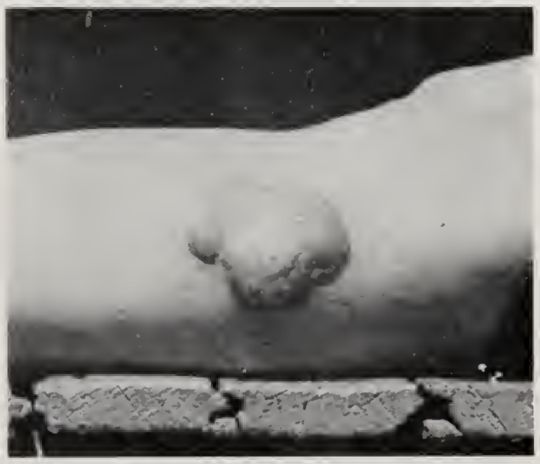

FIG. 1. The tumor of left leg, April 1946

REPORT OF CASE

L. F., a white male 80 years of age, presented himself in April 1946 with several nodules of varying size on the arms and legs. These had been slowly developing during the past few months. The nodules were round or oval, raised, firm, smooth, bluish, and pruritic. The smallest lesion measured 1 cm. in diameter. The largest lesion, located on the lateral surface of the leg, measured 10 by 12 cm. and was a large, fungating, elevated, crusted tumor (fig. 1). The patient presented symptoms of angina pectoris but no other complaints. Physical examination did not reveal any significant abnormalities.

A bilateral, indirect, inguinal hernia was present, together with the senile degenerative changes common in a man of his age. The hemogram was within normal limits. The red blood cells numbered 4,270,000 and the white blood cells 9,600 per cu. mm. of blood, with 68 per cent polys, 28 per cent lymphocytes (large and small), 3 per cent mononuclears and transitionals, and 1 per cent eosinophiles. The hemoglobin was 15.3 Gm. (89 per cent).

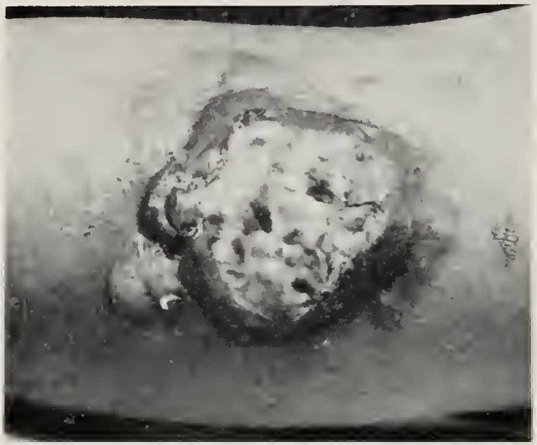

FIG. 2. Later stage in the development of the same lesion after filtered X-ray therapy, February 1947.

A clinical diagnosis of mycosis fungoides d'emblee was made and X-ray therapy instituted. The smaller nodules responded rapidly to unfiltered, fractional X-ray treatment. The large, fungating lesion of the left leg did not respond to subintensive filtered X-ray therapy.

The patient returned, January 1947, complaining of dysphagia, and there were 2 new, deep, subcutaneous nodules near the lower border of the fungating lesion of the left leg. Roentgen examination of the chest showed a mediastinal mass pressing on the esophagus and almost closing it to the passage of bismuth meal. The dysphagia was progressive, and the patient was able to eat only small amounts of food at frequent intervals.

A biopsy of the lesion of the left leg taken January 27, 1947 revealed that there was absence of the horny layer and most of the granular layer over the lesion. The rete was normal but projected into the tumor mass in places. The entire corium and upper dermis were replaced by the masses of tumor cells. These were round and uniform, with most of the cells completely filled with nuclei in active mitosis. In some areas the cells assumed a spindle shape with a flattened nucleus and granular cytoplasm. It was felt that they were sarcoma cells of the reticulum-cell type. The diagnosis made was lymphosarcoma.

The patient received deep X-ray therapy over the thorax, 250 R daily for 5 days (January 29, 1947 to February 3, 1947) from Dr. Edgar McPeak. In spite of roentgen treatment the patient developed increasing fatigue and weight loss. On February 12, 1947 the red blood cells numbered 3,600,000 and the white blood cells 8,100 per cu. mm. of blood, with 77 per cent polys, 20 per cent lymphocytes, 1 per cent monocytes, and 2 per cent eosinophiles; the hemoglobin was 12 Gm (70 per cent).

Since roentgen therapy had failed to interrupt the progress of the disease or produce a remission (figs. 2 and 3), hospitalization was advised with the hope that nitrogen mustard would induce a palliative response.

Medical examination at the time of his hospitalization in Doctors Hospital, March 1, 1947, revealed a drowsy, apathetic, elderly male, weighing approximately 180 pounds. The blood pressure was 135/80, the temperature 98°F., and the pulse rate 70. There was no palpable lymphadenopathy.

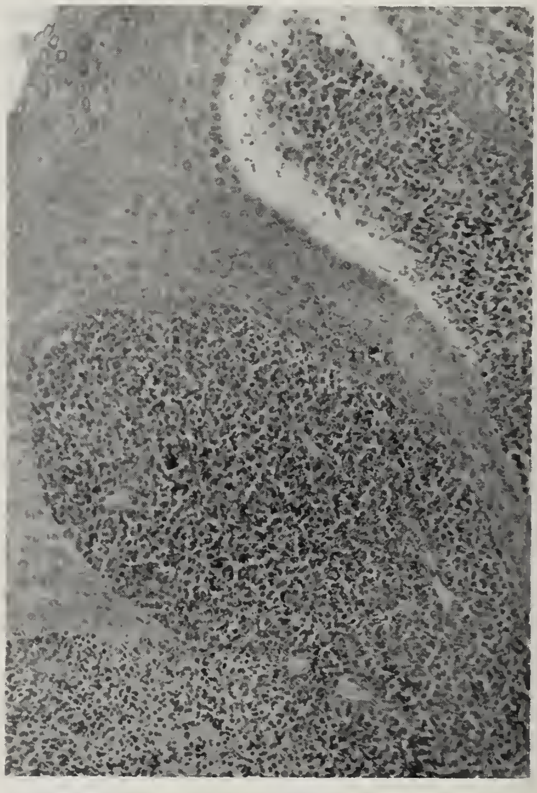

FIG. 3. Photomicrograph of biopsy of tumor of leg before treatment with nitrogen mustard, illustrating the dense infiltration of the corium by lymphocytes and spindle cells.

Treatment with nitrogen mustard [methyl-Bis(B-chloroethyl) amino hydrochloride] was instituted, March

TABLE 1

Laboratory Data on Nitrogen Mustard Therapy

	DATE																
	Apr. 1946	Feb. 1947	Mar. 1 1947	Mar. 2 1947	Mar. 3 1947	Mar. 4 1947	Mar. 5 1947	Mar. 6 1947	Mar. 8 1947	Mar. 10 1947	Mar. 11 1947	Mar. 12 1947	Mar. 13 1947	Mar. 14 1947	Mar. 17 1947	Mar. 19 1947	Mar. 21 1947
Nitrogen Mustard (mg.)				8	8	8	8			8	8	8	8				
Erythrocyte Count (millions)	4.27	3.6	3.9		4.0				4.17					3.2		2.17	3.47
Hemoglobin (Gm.)	15.3	12															
	89%	70%	76%						77%					60%		50%	68%
Leukocyte Count	9,600	8,100	7,300	19,500	4,350	4,200	4,300	3,500	4,000	5,200	3,100	2,200		1,000	250	150	200
Neutrophiles	68	77	86	79	76		82	82	80	79	86	84		69	79	63	52
Eosinophiles		2						1		1		1					
Basophiles																	
Monocytes	3	1	1	1	3		1	1	1	1					1	1	2
Lymphocytes	28	20	13	20	21		17	16	19	19	14	16		30	20	36	46
Young Forms	2	1	2	2	1		1	1	2	1	1	1		2	1	1	1
Band Forms	6	12	8	6	2		2	6	4	3	2	2		4	2	8	12
Segmented Forms	60	64	76	71	73		79	75	74	75	83	81		63	76	54	39

2, 1947 according to the accepted dosage scheme. Eight mg. of the drug was dissolved in distilled water and incorporated in 500 c.c. of normal saline solution which was administered intravenously. This dose was administered daily on each of 4 successive days. The comparative hematopoietic picture is shown in table 1.

On March 4, 1947 the patient volunteered the information that there was improvement in swallowing. The next day swallowing was distinctly easier and the leg ulcer showed some blanching and less elevation of the edges. On March 9, 1947 the patient was comfortable and there was definite regression of the ulcer of the leg.

Roentgen examination on March 18, 1947 of the esophagus with barium by Dr. George Wyatt, and comparison with previous films showed a decrease in size of the esophageal narrowing at the level of the aortic arch, although there was still some narrowing at this level and below it.

Under the recommendation of the consultant, nitrogen mustard therapy was again instituted on March 10, 1947 and administered for 4 consecutive days. With the second course of therapy there was a definite drop in the leukocyte count, which became progressively lower and was associated with a lowered erythrocyte count. The patient's clinical course gradually refletced this damage to hematopoietic function. Another biopsy examination of the tumor of the leg showed remarkable disappearance of tumor cells (fig. 4).

A blood transfusion of 500 c.c. of fresh blood was given on March 18, 1947 and was followed by a chill, but the

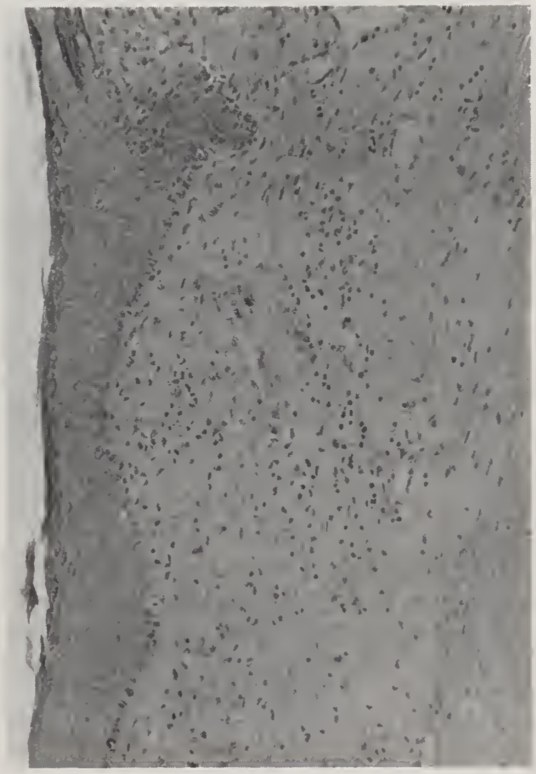

FIG. 4. Photomicrograph of same lesion 21 days after therapy with nitrogen mustard, illustrating the complete disappearance of tumor cells.

temperature returned to normal in a few hours. A second blood transfusion was given, March 21, 1947. The patient complained of a chilly sensation on March 19, 1947, with an elevation of temperature which gradually mounted to 104° F. in spite of intensive penicillin therapy. No petechiae or purpuric lesions were noted. There were numerous small ulcers of the mucosa of the mouth. The ulcer of the left leg was relatively flat and measured 10 by 4.5 cm. on March 22, 1947. The course was progressively downhill, and the patient expired on March 23, 1947.

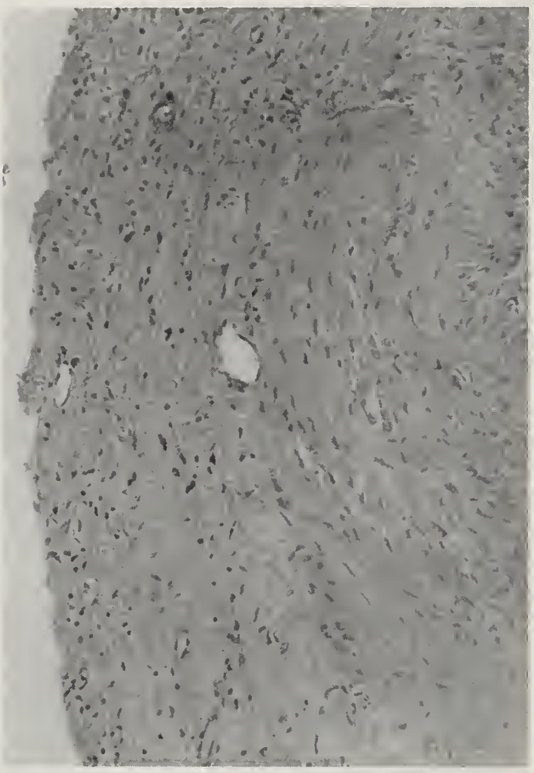

FIG. 5. Photomicrograph of section near center of tumor of mediastinum after therapy with nitrogen mustard.

An autopsy was performed on March 23, 1947 by Dr. Oscar B. Hunter, Jr., and the pertinent features of the pathologic report are here presented: "On opening the body, the esophagus is surrounded by a mass of neoplastic tissue which involves, in addition to the esophagus, the upper part of the thoracic aorta and the arch. This enlargement extends up into the neck to the lower border of the thyroid gland. The lymphatic involvement shows degeneration and hemorrhage. The tissue is somewhat soft and friable. Ulcerations with a brownish granular crust are seen in the upper portion of the esophagus. There are also a few in the lower portion of the esophagus.

"Microscopic examination of sections through the ulcer of the leg reveals the edges to be covered by a mildly hyperplastic, hyperkeratotic, stratified squamous epithelium (fig. 5). There is an abrupt point of demarcation between the ulcer area and the surrounding tissue, and at this point there is a complete necrosis of a coagulation type which involves the tumor cells. The ghost of the tumor cells can be seen in the background. The remainder of the tissue appears to remain friable. The vessels and their walls are not distorted except where collapse of the surrounding tissue and subsequent obliteration have occurred. In the deeper portions of the tissue there is a dense fibrous scar in which there are a number of large sclerotic vessels. There is also a mild chronic, inflammatory reaction consisting of normal lymphocytes and plasma cells with a scattering of polymorphonuclear leukocytes. This appears to be in the process of healing.

"Sections through the esophageal lymph node reveals complete necrosis of the tumor area of a coagulation type. There is a sharp line of demarcation between the tumor area and the surrounding connective tissue. The surrounding connective tissue shows a considerable amount of scarring and laying down of fibrous connective tissue. The vascular bed is generally congested.

"Anatomic diagnosis: lymphosarcoma with constriction of the esophagus, and cutaneous involvement of the left leg."

SUMMARY

1. A case of lymphosarcoma of the skin is presented.

2. Regression of a large cutaneous lesion and recession of the esophageal constriction by the neoplastic tissue were observed between 1 and 2 weeks after institution of nitrogen mustard therapy.

3. The toxic reaction which may result from excessive dosage with nitrogen mustard is illustrated in the case. Death was hastened by the toxic effect of the nitrogen mustard on the bone marrow from too frequent administration of the drug.

4. The striking destruction of the tumor cells by nitrogen mustard is illustrated by their complete destruction in both the ulcer of the leg and in the tumor masses in the mediastinum. This is shown by the microscopic appearance of the ulcer before treatment and after the death of the patient.

(*Continued on page 428*)

THE USE OF METHYL-ISO-OCTENYLAMINE (OCTIN) IN MIGRAINE AND RELATED HEADACHES[*]

Preliminary Report

ALVIN SELTZER, M.D.
Washington

THIS report is concerned with the evaluation of the effect of the drug Octin (methyl-iso-octenylamine)[†] in the treatment of patients with migraine and related recurrent headaches. This study extended over a period of 7 months and included 22 patients who have been continually followed and repeatedly treated with this drug. Although Octin has been used for many years as an antispasmodic, particularly in the genitourinary field, it was first used in migraine in 1945 by Palmer.[1] This drug apparently has a two-fold action: a mild stimulation of the inhibitory fibers of the sympathetic nervous system and a direct relaxation of involuntary muscles with constriction of the blood vessels.

Toxicity experiments with this drug have been carried out on animals by Drs. R. P. Walton and C. B. Preacher[2] and have not shown any appreciable deleterious effects. In particular, it is to be noted that no gangrenous changes were noted in these animals, in contrast to the readily produced gangrene with ergotamine in comparative doses.

The use of any new drug for the relief of migraine must be reported and interpreted with great restraint. The mechanism by which these headaches are produced is not entirely understood, but it seems reasonably sure that many of these headaches are related to a vascular phenomenon dependent upon alterations in the caliber of the cerebral, dural, or scalp vessels.

The multiplicity of drugs used for the relief of migraine headaches testifies as to the ineffectiveness of any single drug for all types of recurrent headaches. The drugs which are most commonly used for the relief of these headaches fall into two general groups, namely, the sympathicomimetic and vasoconstrictor type of drugs, such as gynergen and D.H.E. no. 45, and the vasodilator type of drug, such as nicotinic acid and histamine. Octin apparently belongs to the first group of these drugs.

This drug was used orally as well as parenterally. The effectiveness of the drug by mouth for the relief of headaches is quite important, since many of these headaches are easier aborted if treated early in their course, and it is much more convenient for the patient to take a tablet rather than to get a hypodermic injection, and thus the patients will coöperate better with oral doses of medicine.

The dosages used were set as follows: For oral use, 1 tablet consisting of 2 grains of Octin mucate was to be taken early in the course of the headache and repeated every half hour if the headache was not relieved, up to a total of 4 tablets. It was found that the average patient would obtain relief from the first tablet, if he were to get any relief at all; however, in several cases the oral tablet would seem to postpone the headache only temporarily for 3 or 4 hours, and thus many patients spontaneously took their Octin tablets every 4 hours for several doses, rather than $\frac{1}{2}$ hour apart. For parenteral use the dosage used was as follows: The first dose was 0.5 c.c. of Octin hydrochloride ($1\frac{1}{2}$ grains per c.c.) given intramuscularly. The first dose was necessarily small to test for possible hyper-reactors to this drug and could be increased up to 2 c.c. as needed, later. The usual case required about 1 c.c. for relief. Several patients who had only partial relief from oral Octin obtained full relief from the parenteral Octin. Because of the irregularity in severity and intervals between attacks of these headaches it was felt that it was better to attempt to abort the headache by prompt use of the drug at the first sign of the headache rather than put the patient on a daily maintenance dose of this drug.

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[*] From the Allergy Clinic, Washington Regional Office of the Veterans Administration, Washington, D. C.

[†] Octin is manufactured by the Bilhuber-Knoll Corporation of Orange, New Jersey, that kindly supplied the material for this investigation.

The side-effects of the drug by oral route were minimal, consisting of sensation of weakness, paresthesia of the face and arms, and a sense of sluggishness or nervousness. It was not necessary to stop the use of the drug orally in any patient because of adverse reactions.

The side-effects of the drug by parenteral route in addition consisted of occasional episodes of nausea and vomiting with palpitation, weakness, and sense of fainting, if erect. In 2 patients there was a transient rise of blood pressure from about 120 up to 160 for 1 to 2 hours. This drug, therefore, should not be given to patients with considerable hypertension, and a small test dose should be used at the start to discover those patients with unstable vasomotor systems.

The classification of the various types of recurrent headaches into specific groups, such as migraine type, histamine type, atypical facial pains, etc., while notoriously difficult and inaccurate, was attempted; however, the drug was used in all types of recurrent headaches, including several cases of functional headaches.

This drug was repeatedly used on 22 patients who were followed with physical examination, blood pressure reading, and blood and urine examinations when indicated. There were no apparent deleterious effects noted.

The drug was used in 12 cases of typical migraine with 7 good effects and 5 questionable to poor effects. In 4 of these cases the drug was effective orally. It was used in 4 cases of histamine headache, with 2 good effects and 2 questionable to poor effects. In 1 of these cases the drug was effective orally. It was used in 1 case of atypical facial pain with questionable effect. It was used in 6 cases of anxiety state with functional headaches, with poor effect in all cases. The drug was also used in 1 case of Ménière's disease with beneficial effect, and also in 3 other cases of migraine with beneficial effect. However, since these cases were only seen once and not followed up, they were not included in this series.

It is to be noted that the best effects of this drug were in cases of typical migraine, whereas no effect was noted in functional headaches. It is felt that the action and physical sensations of this drug are not as dramatic as other drugs, such as histamine, etc., and as such does not favorably influence the psychogenically-affected patient with the "power" of the drug.

It is felt that Octin has a place in the symptomatic treatment of some types of migraine and related headaches when properly controlled and used. Its effectiveness in some cases via the oral route makes it very convenient for the patient to use. This drug has only a symptomatic effect and should not take the place of a careful diagnostic work-up and other forms of treatment for these recurrent headaches.

2025 Eye Street, N. W.

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2. Walton, R. P., and Preacher, C. B.: Toxicity of Methylamino-iso-octene. Federation Proc., 1946, 5, 211.

President's Page

WE MUST GROW UP MEDICALLY

In my initial message as President of the Medical Society of the District of Columbia, I wish to discuss briefly the programs to be presented before the Society in the coming year. It has been the custom in the recent past to invite speakers, often of national note, from outside Washington to present programs. This custom has grown to such a point, apparently accentuated by the War years, that it has become the exception rather than the rule to have a paper presented by a local physician.

This is to me a travesty of the situation which should exist in the main forum which the profession of the District has for presenting the work done in our hospitals, and clinics, and the thoughtful products of long hours spent at the bedside of the sick, or in the laboratory.

It is difficult to see how the Society can justify itself as a professional body, the first function of whose members is, in direct, or indirect (as in research) ways, the care of suffering humanity, when it offers no opportunity to its members to present, and above all to have openly discussed, their own work.

To those who say that we have had the opportunity to listen to authorities in their fields, I would answer, it is better to have an indifferent paper offered by one of our own members and to have open free discussion in even a small group, than to have the vicarious satisfaction of listening to some authority from distant parts whose work may actually be no better than work being done in our midst, in similar fields, and of whose paper there can be no true discussion.

Washington must grow up medically. Until it does, and there is free discussion of the first-rate work done here, the medical profession will not stand on its own feet.

The program committee has been charged with the responsibility of giving opportunity for the presentation of the work done here in our own midst, much of which is of excellent quality, and would open our eyes to what we have, and open the eyes of other cities.

It is earnestly hoped that everyone in the Society will feel free to offer papers, and above all, feel free to discuss them in open meeting—a method of thought stimulation for which there is no substitute.

I am for Washington showing what she has of ability, energy—hence stimulating the development of more of the same.

John Minor

Editorials

JOHN MINOR, M.D., F.A.C.P.

Dr. John Minor, 82nd President of the Medical Society of the District of Columbia, is a native Washingtonian. His father, the late Dr. Charles Launcelot Minor, of Asheville, North Carolina, one-time President of the National Tuberculosis Association, was known as the "Trudeau of the South." Dr. Minor's mother was Mary McDowell Venable, member of a distinguished Virginia family.

Dr. Minor was born on October 25, 1893. He received his early education in nearby Virginia, graduating from Episcopal High School, Alexandria, in 1912. Immediately thereafter he entered the University of Virginia, from which he received his Bachelor of Arts degree in 1916. His first two years in medicine were taken at the same institution, his junior and senior years at Harvard Medical School, from which he was graduated in 1919. He interned at St. Lukes Hospital, New York City; residencies at Presbyterian Hospital, New York, followed.

Dr. Minor began practice in the District of Columbia in 1922. In the years which followed, he became one of Washington's outstanding physicians. His specialty is internal medicine, in which field he is certified by the American Board of Internal Medicine.

Among the national professional organizations of which he is a member are the American College of Physicians, American Heart Association, American Clinical and Climatological Association, Society of Consultants of World War II, and the Southern Medical Association. He is also a member of several local medical societies, including the Clinico-Pathological Society, the Osler Society (retired), and the Physician-Veterans of World War II of the District of Columbia.

No novice when it comes to medical organization, Dr. Minor has served the Medical Society of the District of Columbia in various official capacities. He was First Vice President of the Society in 1935–36, and Chairman of the Committee on Public Health in 1939–40. As President-elect in 1947–48, he has been a member of the Executive Board.

Few Washington physicians served with greater distinction in World War II than Dr. Minor. Commissioned Lieutenant Colonel in the Medical Corps of the United States Army on October 15, 1942, he was promoted to full Colonel on May 5, 1943. In the course of his service, he was Chief of Medical Service at Woodrow Wilson General Hospital at Staunton, Virginia, and Medical Consultant of the Third Service Command. For his services as Consultant he received the Legion of Merit.

Dr. Minor has long been actively interested in medical education. Since he entered medical practice, he has been Assistant in Medicine at the George Washington University School of Medicine. He is at present Teaching Consultant at Walter Reed General Hospital, having been appointed to this position in 1946. He is also Chief of Medicine at Emergency Hospital, Washington, a member of the Deans' Committee for Mount Alto Hospital, and a member of the Committee on Medicine of the Division of Medical Sciences of the National Research Council.

As might be expected of a man so well qualified in his profession, Dr. Minor also has many outside activities. He is a member of the Board of Trustees of Episcopal High School in Alexandria, Virginia, and a member of the Vestry of the Church of the Epiphany, Washington, D.C.

JOHN MINOR, M.D., F.A.C.P.

President, The Medical Society of the District of Columbia, 1948–1949

Among the clubs and other organizations to which he belongs are the Chevy Chase Club, Delta Psi Fraternity and the Aesculapian Club.

His wife, the former Mildred Angevine Truslow, died in 1946.

Dr. Minor's office is at 2030 R Street, N.W., his residence at 1629 Twenty-first Street, N.W.

There is nothing ostentatious about Dr. Minor. He is a quiet, rather retiring man who is highly respected by his colleagues. He holds definite views about many medical matters, and once convinced that he is right, he is unshakable. This characteristic has won him many friends and admirers.

Dr. Minor believes that too few people outside the Nation's Capital recognize the worth of its physicians and medical institutions. He proposes during his presidency to enlist the active support of the medical profession which, in his opinion, has not been sufficiently aware of its opportunities for leadership in medical education, research, and practice. By this and other means, he will endeavor to further the reputation of Washington as a great medical center.

The Society can count itself fortunate in having such a determined and forward-looking leader.

THE EVOLVED TREATMENT OF ADVANCED PROSTATIC CARCINOMA

Since 1 milligram of estradial dipropionate was injected into a patient with advanced prostatic carcinoma in August 1940,[1] the following policy in regard to the use of steroid chemical imbalance therapy has been evolved:

1. No therapy other than general supportive measures is instituted if the presence of an advanced prostatic carcinoma is an accidental finding even though evidence of osseous or other metastasis be demonstrated.
2. Obstruction is treated by transuretheral resection independently of any other consideration.
3. When pain or an unfavorable clinical trend develops, castration, either surgical as described by Chute[2] or by roentgen irradiation as proposed by Munger[3] is carried out.
4. No further treatment except supportive measures is carried out unless the clinical trend becomes unsatisfactory or pain occurs.
5. When the effect of castration has failed to control the trend, stilbestrol or any estrogenic substance is given in the smallest doses which will result in adequate symptomatic control. One milligram of stilbestrol per day is the initial dose.
6. The tongue is observed very carefully for any indication of vitamin deficiency, and adequate vitamin therapy is instituted to take care of any such deficiency.
7. Any evidences of anemia are combated by vigorous therapy including transfusions when necessary.
8. If or when estrogens are no longer effective in massive doses, the pituitary is subjected to radiation.
9. Local painful areas are treated symptomatically by irradiation.
10. If pain is so situated that nerve-blocking procedures are feasible, these are instituted.
11. If gynecomastia becomes too painful, the breasts are removed by simple amputation.

This problem is too complex to comprehend at the present time, but there are several considerations which should receive attention. First, no two patients are identical and the way they respond to treatment is an individual pattern. We may administer steroids, but no one knows what is to be the fate of that steroid. The liver is a vitally important factor and has

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[1] Herbst, W. P.: Tr. Am. A. Genito-Urin. Surgeons, 1941, **34,** 195.

[2] Chute, R., Willetts, A. T., and Gens, J. P.: J. Urol., 1942, **48,** 682.

[3] Munger, A. D.: Ibid., 1941, **46,** 1007.

NEW AUXILIARY PRESIDENT

MRS. EDGAR E. QUAYLE

President, Woman's Auxiliary to the Medical Society of the District of Columbia, 1948–1949

the ability to inactivate any steroid, and, what is more, one steroid may be transformed into another. The initial pattern does not persist.

There are definite risks in giving estrogenic steroids. Cerebral hemorrhage will occur in some instances, due possibly to the effect of estrogens on the tensile strength of the fibrous tissue cells in the blood vessel walls. Petechiae may occur in some instances, and these can be controlled by giving calcium gluconate orally or intravenously. Thrombophlebitis occurs in rare instances, and if this happens to be extensive and progressive, the estrogens must be discontinued.

Edema of the genitals or lower extremities, when it occurs, usually subsides and may be controlled in most instances by the administration of calcium.

When nausea occurs, it may be controlled by varying the time of administration of the estrogen or by giving it hypodermically.

There is nothing that can be done for the feminine distribution of fat and changes of the genital organ which occur after the prolonged administration of estrogens.

Hot flashes following castration are usually controlled by small doses of estrogen or benzedrine. The policy in some quarters[4] of the administration of massive doses of estrogen does not seem logical, in so far as our experience with this type of therapy is concerned. It is our impression that the larger the dose employed, the shorter the duration of control and actually a lessened life expectancy. There may be one theoretical foundation for the utilization of large doses, namely, the development of an irreversible estrogen-androgen balance of the female. No evidence has been presented at the present time to substantiate this hypothesis.

The influence of castration on diabetes mellitus is of interest because in some instances castration results in a striking reduction in the degree of glycosuria and elevated blood sugar.

Colston[5] has suggested the practice of radical prostatectomy of malignant glands which he states have been rendered operable following the administration of stilbestrol. This is a very intriguing idea and undoubtedly deserves further consideration.

We hope as time goes on that imbalances which we produce and which are so effective may be recognized in all details and means devised to maintain these imbalances. Any plan of treatment which is such a spectacular pain reliever and which has resulted in an increased life expectancy has been a very worthy contribution in the field of the chemical control of tissue growth.

William P. Herbst, M.D.

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[4] Deming, C. L.: Hormonal influence in heterologous growths of human prostatic cancer, to be published.

[5] Colston, J. A. C., and Brendler, H.: J. A. M. A., 1947, 134, 848.

OUR MEDICAL ORGANIZATION*

Raymond T. Holden, M.D., F.A.C.S.

President, The Medical Society of the District of Columbia, 1947–1948

In opening this series of lectures, it would seem wise to state briefly the reasons for the introduction of this Orientation Course. During the past three years, the Society has added a tremendous number of new members. Many of these are men who have chosen to enter practice here for one reason or another after a number of years of practice elsewhere. Still others are recent graduates, or men recently released from the armed forces who are entering practice for the first time. To the former group, who are familiar with the functionings of medical societies and with the ways of practice, these lectures may seem superfluous, but it is felt that they will, by promoting a clear understanding of the history, policies and position of this Society, serve to quickly integrate the older new members into our program. The latter group, the younger new members, will receive advice and guidance which should be of inestimable value in establishing themselves in practice. They will become acquainted with the many benefits available to members of a well organized national medical group which has as its aim the advancement of the art and science of medicine, the promotion of the public health, and the protection of the standards of the practitioners of medicine.

Courses similar to this have been instituted in one or two other local societies. They have in every case been enthusiastically received, and we trust that this one will also be well received.

In beginning this course, a brief historical sketch of the Society over its more than 125 years of existence may prove of interest. As early as 1817, practitioners of medicine in the District of Columbia met for the purpose of organizing a society. It is interesting to note that ours was the twelfth medical society to be organized in the United States. Though this organization was of benefit professionally to its members, it did not serve to limit the number of irregular practitioners then locating in the city. Consequently, the decision was reached to petition Congress for a charter or act of incorporation under which any but competent physicians would be prohibited from beginning practice in the District. This was done and the first charter was signed by President James Monroe on February 16, 1819. This charter was almost an exact duplicate of that of the Medical Chirurgical Faculty of Maryland, and under it the Society was empowered, besides being authorized to pursue its scientific bent, to set up a board of medical examiners for the District of Columbia and to examine and grant licenses to those considered competent to practice medicine. The Society functioned under this charter for a number of years. However, through failure to elect annually the members of the board of medical examiners as provided, the charter was forfeited. A new charter was granted by Congress and approved by President Van Buren on July 7, 1838.

Due to the restrictions placed on it by its charter, the Medical Society was strictly a licensing and scientific body. Its members were not permitted, as such, to promulgate rules of ethics or fee schedules or to engage in any but the activities specifically stated. Consequently, another organization, the Medical Association of the District of Columbia, was formed in 1833. The purpose of this Association was to formulate codes of ethics, fee schedules, and to be active in promoting favorable legislation having to do with health and public welfare and the practice of medicine. A prerequisite for membership in this organization was membership in the Medical Society of the District of Columbia, and frequently the officers of one group were the same men as those of the other group. Both of these groups continued in existence until 1911, when their amalgamation resulted in the Medical Society as it is known today.

In 1896 the passage of the Medical Practice Act eliminated one of the principal functions of the Medical Society, namely, the examination and licensing of physicians. It then continued as purely a scientific group. The Medical Association had become the local constituent group of the American Medical Association. It functioned purely as a policy-making body, though its entrance into the scientific field of medicine was continually urged by its parent organization. Realizing that they would best continue to exist as one, the two organizations worked out details of amalgamation, and in 1911, by adopting the same Constitution, they were joined. At this time, an effort was made to obtain a new charter that would allow wide freedom in the actions of the Society. But an acceptable one could not then be obtained from Congress and the Society relinquished its corporate status. However, in 1924 the charter was revived and amended to its present form by Congressional action.

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* The first lecture in the Orientation Course for new members of the Society, April 3, 1948.

Throughout the early days of their existence, both the Society and the Association met in various quarters—in hotels, taverns and assembly halls about the city. In later years, meetings were held at the Georgetown University Medical and Law Schools and at the George Washington University Medical School. That latter location served as the regular meeting place for a number of years prior to the construction of the present Medical Society building.

In 1867 a building was erected at the southwest corner of 10th and F Street, N.W., for use as the permanent home of the Medical Society. Unfortunately, some difficulty was encountered in maintaining payments on the property, and in 1871 it reverted to the bondholders.

In 1894 another move to build a permanent home was started, but died for lack of interest. By 1917 the desirability of having a suitable building of its own was recognized by the Society and plans were made and funds raised for the undertaking. This project, under the able and distinguished leadership of Dr. E. Y. Davidson, for whom the Society in gratitude established the Davidson Lecture, was completed, and the first meeting in our own and present home was held in January, 1921. The use and possession of its own building has been of inestimable value in raising the prestige and morale of the Society, and in service and convenience to its members.

Prior to 1937 the officers of the Society had all been elected, and they had served faithfully and well with the help of a small office force. As the prestige of the organization increased, it became more and more involved in the health and sanitation and other affairs of the community, the distribution of medical care, and the welfare of its own members. Realizing that this multitude of operations could no longer be carried on efficiently by a part-time staff, no matter how industrious, the Society in that year voted to employ a full-time Secretary. The first, who is our present Secretary, Mr. Theodore Wiprud, and who also serves as Treasurer, was placed under contract in the spring of 1938. This new policy necessarily required considerable change in the Constitution and By-laws under which the Society operates. A complete revision of these instruments was undertaken, and in 1939 the present Constitution and By-laws was adopted. Under the new articles, the operational policy of the organization was arranged to conform with the new executive secretary set-up. Except for a few amendments which have from time to time seemed advisable for clarity and to meet new situations, the Constitution as radically revised in 1939 is now in effect.

It should not be necessary to go into detail regarding the Constitution and By-laws. A brief statement of certain of the salient features should be sufficient. The object of the Society is fully stated in Article II of the Constitution, which reads as follows: "The object of this Society shall be the promotion of the science and art of medicine and sanitation and the common interests of its members and the public." All of its existence has been directed toward this objective.

There are four classes of Society membership: Active, Life, Associate, and Honorary. Active membership is limited to citizens of the United States who are reputable, legally qualified practitioners of medicine, who are engaged in the practice of medicine in the District of Columbia, and who are not active members of any other constituent association of the American Medical Association. These members may vote and hold office. Life members are Active members who have been such for forty years. They have all the privileges of Active members but are exempt from dues and assessments. Associate members are doctors of medicine not eligible for Active membership, or scientists in collateral lines of activity or research. They are elected in the same manner as Active members, are privileged to attend and participate in the scientific sessions of the Society, and are subject to its discipline, and such dues and assessments as it may levy. But they are not privileged to vote or hold office. Associate members, on becoming eligible for Active membership, are required to make formal application for the same within three months. Honorary members may include any physician, scientist, or other person who deserves recognition by reason of eminent contributions to medicine or collateral science, or for meritorious services to the medical profession.

All recently elected members are familiar with the processing received by themselves and by their applications—namely, formal proposal, presentation at a business meeting by the Secretary, review by the Board of Censors, election by the Executive Board, and finally approval by the Society.

Under the present Constitution, only one stated business meeting is held each year, though others can be held by order of the Society, the Executive Board, or upon the written request of thirty-five members of the Society. This provision is to conserve the time of the membership at large, and to enable a greater proportion of the sessions to be devoted to scientific dicussion. At present, two scientific sessions are held monthly from October through May. All regular sessions are held on Wednesday evenings in this auditorium.

Dues for Active members at the present time are $30.00 a year, except for recent graduates who have been in practice less than three years. They pay $10.00 the first year, $20.00 the second, and thereafter $30.00 per year. Associate members pay $10.00 per year. Life and Honorary members naturally pay no dues or assessments.

Officers of the Society are the President, President-elect, First and Second Vice Presidents, Secretary-Treasurer, and two Delegates and two Alternates to the House of Delegates of the American Medical Association. These, with the exception of the Secretary-Treasurer, who is appointed by the Executive Board, are elected annually by ballot, except the Delegates to the House of Delegates of the AMA, who are elected for two-year terms.

The Executive Board is empowered to carry on the ordinary business of the Society with all of the powers of the Society itself, subject to the Constitution and By-laws and to the action of the Society. However, all matters of policy must be referred by the Board to the Society for action. The Board is further charged with keeping the Society fully informed of its activities by regular reports. This Board is composed of four members, elected one each year for a term of four years, the senior of whom serves as Chairman of the Board, and the President, President-elect, and Senior Delegate to the AMA, who are ex-officio members of the Board. The Secretary of the Society serves as Secretary of the Board without vote.

The three members of the Board of Censors are elected one each year for a term of three years. The duty of this Board is to inquire into applicants for membership, and to recommend the election or rejection of same.

There are nine standing committees of the Society. Several of these have subcommittees. There are also a number of special committees, organized to care for certain specific interests of the Society. In all, about 250 members of the Society serve on committees. All committee appointments are made by the President and confirmed by the Executive Board. The standing committees are as follows:

1. Program Committee, which studies the character of and prepares the plans for the scientific programs.

2. Committee on Postgraduate Education, which organizes material for postgraduate instruction.

3. Committee on Public Health, which is active in matters of public health in so far as they affect the community and as the Society directs.

4. Committee on Public Relations, which is the source of factual information regarding medical and hygienic matters for dissemination to the public. This committee, besides informing the press, also conducts a Speakers' Bureau through which speakers on medical subjects are made available to lay audiences.

5. The Committee on Public Policy makes available information to public officers so that they may better discharge their duties in enacting and enforcing measures in the interests of public health.

6. The Committee on Industrial Medicine supervises all matters in that field. It also prepares regulations and fee schedules for compensation practice.

7. The Grievance Committee receives complaints from laymen and physicians relating to the relationship of physicians to their patients or to each other. This Committee, after hearing such complaints, may make such recommendations for censure to the Executive Board as it sees fit. This is an extremely important committee, as it serves in many respects as a good-will committee, settling amicably many complaints about and between physicians.

8. The Committee on Medical Care investigates

and makes recommendations concerning matters relating to the social and economic aspects of medicine.

9. The House Committee supervises the Society's property and recommends changes or extensive alterations therein.

All committees are under the supervision of the Executive Board, and report on their activities to the Society at the Annual Business Meeting.

There is ample provision in the Constitution for the formation of sections composed of members interested in one of the special divisions of medicine. At present there are in existence sections on (1) ophthalmology, otology, rhinology, and laryngology, (2) neurology and psychiatry, (3) pathology and laboratory medicine, (4) gastroenterology, (5) pediatrics, (6) anesthesiology, (7) general practice, and (8) radiology.

All members of the Society subscribe to the Principles of Medical Ethics of the American Medical Association, and agree to be bound by the Constitution and By-laws of the Society in regard to their duties and obligations, and the regulation of their professional conduct and relations with the Society and with each other.

The position of the Society in relation to the AMA, its parent organization, is unique. Locally, it is constituted in much the same manner as a county medical society in any large city, and within the confines of its territory is autonomous. However, here the similarity ceases, for while the usual county medical society is a component of a state organization and is represented by delegates elected to the state society, which in turn elects delegates to represent it in the national organization, the Medical Society of the District of Columbia elects its own delegates directly to the House of Delegates of the American Medical Association. In this respect, it is a state medical organization, and is much closer to its parent than the usual county society. Another distinct advantage of this arrangement is that in all matters of national importance with which the AMA is concerned, this Society is advised on the same level as other state societies, and is represented equally with state organizations in all national meetings of officers or representatives of state groups. Thus we are closer to the pulse of medical affairs and as a result play a prominent part in them.

Medical societies in the five counties immediately adjacent to the District are components of their various state societies. Their members are, therefore, not eligible for active membership in this Society. But many acquire Associate membership with its accompanying advantages. In turn, members of this Society may become Associate members of a county society, and some do. Because of the local geography and the intermingling of populations and physicians, this Society feels very close to its confreres in the counties and is ever ready to assist or join with them in the solution of individual or common problems.

Besides automatic membership in the American Medical Association and the prestige which goes with being a part of the official medical organization of the community, membership in this Society carries with it opportunities to serve the public and the profession as well as a number of direct benefits to its members.

Each member receives monthly the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, the official publication of the Society, which is rated one of the best state medical journals in the country. It is the medium through which members can express themselves on scientific and other subjects. Classified advertisements may be placed in the journal by members at no cost.

The ANNUAL SCIENTIFIC ASSEMBLY is one of the most instructive and profitable activities of this organization. Since 1929 it has been held each year, with the exception of one during the War. This year the 19th ASSEMBLY will be held at the Hotel Statler, September 27, 28 and 29. The program continues over three full days, during which time many of the country's prominent physicians will lecture. Scientific and Technical Exhibits, and a Public Health Exhibit for the laity have been planned. During the course of the meeting there will be many social events, such as luncheons and the annual banquet. The ASSEMBLY is one of the largest state meetings and offers something of benefit to each member who attends.

MEDICAL SERVICE OF THE DISTRICT OF COLUMBIA is the Society's prepayment medical care plan. It has been very much in the news lately, having begun operation on April 1.

The SERVICE provides surgical and obstetrical services supplemented by X-ray, laboratory and anesthesia services to groups of subscribers. The details of this plan should be of interest to every member of the Society. Time does not permit their discussion here except to say that subscribers pay a small monthly fee for which they are entitled to service. Physicians are compensated on the basis of a fee schedule. There are so-called income levels, the plan paying the full amount for services rendered to single subscribers whose income is under $2,500, or man and wife or family whose income is under $4,500. Needless to say, this is a most important undertaking, both from the standpoint of physicians and the public. Members not familiar with the SERVICE can obtain complete information about it from the Secretary of the Society.

The MEDICAL BUREAU is the Society's 24-hour telephone exchange. The BUREAU is operated under the supervision of the Medical Bureau Committee. One of its principal functions is to transmit calls to physician-subscribers when they are not in their offices. For this purpose there are two types of service: the Alternate Listing Service, in which the physician has a special listing inserted following his number in the telephone directory, "If no answer, call MEDICAL BUREAU, Republic 6100"; and the Secretarial Service, in which an extension is installed from the physician's office to the switchboard at the BUREAU. Under the latter arrangement, the doctor throws a key in his office, which reroutes all his calls to the BUREAU. Operators answer as if they were in the doctor's office.

The Society has made available to the BUREAU a Classified List of all its members. When inquiries for physicians are received the names of three are given in rotation. Although this list was established for the public's convenience, obviously it benefits physicians who are on it. In fact, many communications received at the Society's headquarters indicate that this is the case. Physician-subscribers to the BUREAU who wish to be listed on the so-called Emergency List receive calls in rotation if the patient calling the BUREAU has no physician. In other words, the Emergency List differs from the Classified List in that if the patient has no family physician, one is sent out in cases of so-called emergencies. Members who are not familiar with the BUREAU will find the services provided well worth looking into. In fact, they should not fail to do so. At the present time more than 550 physicians subscribe to the BUREAU.

An agreement was effected some years ago with Group Hospitalization, Inc., whereby Society members are privileged to subscribe as a group. Nearly five hundred physicians and their dependents are now participating. The Secretary of the Society is the Group Treasurer. He is responsible for the collection of subscribers' fees. Details about the Group Hospitalization plan can be obtained by calling the Society's office.

Formerly the Society maintained a Medical Defense Fund which was liquidated on advice of Counsel. However, the Society's group malpractice policy, underwritten by the United States Fidelity and Guaranty Company, is available to all members. It is to the advantage of members to purchase coverage under this policy, rates for members being less than for non-members. A group health and accident policy for members, written by the Massachusetts Casualty Company, has been endorsed by the Society. Information with respect to this insurance can be obtained by calling the Society's office.

For the convenience of members requiring office personnel the Society's office keeps a list of secretaries, technicians and office assistants.

Some years ago an arrangement was entered into by the Department of Vehicles and Traffic of the District of Columbia, the Washington Metropolitan Police Department, and the Society, granting special parking privileges to members when on urgent professional calls. Cards were prepared to be placed in the windshield, together with rules informing members where they might park in emergencies. Cards and rules may be obtained at the Society's office.

Official AMA auto emblems, designed for use by members of the Society, can also be purchased at the Society's office.

In addition to the above services, general assistance is given physicians in obtaining office space, placement of physicians with other practitioners and institutions, licensure, taxes, etc. The Society's Secretary is only too glad to be of assistance to those who have special problems.

In concluding these remarks, it should be emphasized that members obtain benefits from the Society in proportion to what they put into it. First of all, they must inform themselves with respect to

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Washington Physicians of Yesterday

DANIEL KERFOOT SHUTE, M.D., A.B., D.Sc.

Recapitulation,
Root, root, root,
Who knows anatomy?
Shute, Shute, Shute.

The survivors of his classes remember and frequently recall that doggerel as an expression by which his students in anatomy testified the esteem and appreciation which they entertained for their teacher, Professor Shute. The reference was to the emphasis which Dr. Shute in his lectures and writings laid upon embryonic recapitulation, the correspondence of ontogenesis with phylogenesis.

Dr. Shute was born October 22, 1858, in Alexandria, Virginia. From the Columbian (later George Washington) University he received the degree of A.B. in 1879; of M.D. in 1883; and of D.Sc. in 1932. He took a postgraduate course in ophthalmology in the Royal London Ophthalmic Hospital and the University of Berlin; and he was an acting clinical assistant in the London Hospital in 1891.

He engaged in the practice of ophthalmology in the city of Washington down to the day of his death; and he was ophthalmologist to most of the hospitals of the city. An authority in the subject, he was Prosector, Lecturer, and

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GRAPHIC ART IN MEDICINE

Mathilde N. Shapiro
Medical Illustrator, Washington

The surgery, the hospital, the classroom in medicine, the research laboratory, and even the doctor's office have all become intrinsically enhanced by medical art, the most recent development of the graphic arts as applied to medicine. Its importance may be evaluated by the realization that progress has come through a three-way development—written, spoken, and graphic language especially as applied to medicine. For amplification of this, it will be necessary later to review briefly the evolution of the pictorial in medicine to its present highly developed stage of medical art.

A medical illustrator is more than a mere artist who paints medical subjects; he is one who has had a thorough background in the premedical sciences and the fine arts, all of which, including college training, is a prerequisite to the three-year course in medical illustration. The artist has made a long, detailed study of osteology, myology, neurology, and histology, and is familiar with pathologic processes. In order to draw accurately, for example, an operation of a splenectomy, there are many surgical considerations. Access to the spleen can be obtained by an angular or bow-shaped incision, by a vertical incision, or by an oblique subcostal incision, and then there is to be considered the two methods for removal of the organ. With a knowledge of anatomy, surgical procedure, and medical terminology the artist can represent on paper the steps taken to perform the operation. Although there are instances when photography can best reproduce cases, such as in a general picture of the body, skin lesions and large scenes, the camera is unable to pick up the necessary detail that can be drawn. A medical artist can emphasize particular pathologic tissue and eliminate the unessential material, such as mucus, blood, and the surgeon's hands.

A situation may arise when a doctor having completed a research problem would like a drawing of the human body, illustrating his findings. n this case a picture of a patient is created showing the external and internal clinical manifestations and pathologic physiology. Lantern slides are made of this drawing and used in teaching medical students and also in helping to clarify the doctor's study. With the development of research in veterinary medicine and dental science there has also been a growing need for medical art in these particular branches.

Pharmaceutical laboratories as a service to the medical profession publish the results of their research. These publications are beginning to have medical illustrations rather than just advertisements and are placing emphasis on scientific correctness rather than merely an artistic drawing. A composite illustration can show the anatomy and pathology of structures involved with relation to the drug.

The medical illustrator also studies the use of the camera and moulage. A plastic surgeon may wish casts made to show the necessary steps taken to transform a disfigured face to its normal contour. During the last War as the progress of medical science saved the lives of thousands of wounded, the medical artist helped restore disfigurations and thus the morale of the injured soldiers. Sometimes the disfigured face or part of the body requires that the artist make an artificial part, a process known as prosthesis.

Medical illustration, just as many other professions, has a long and noble history. The Chinese, Greeks and Egyptians had performed dissections long before the Christian era and had expressed their findings in crude portrayals of the skeleton. Their anatomic figures were copied and recopied in early medical textbooks.

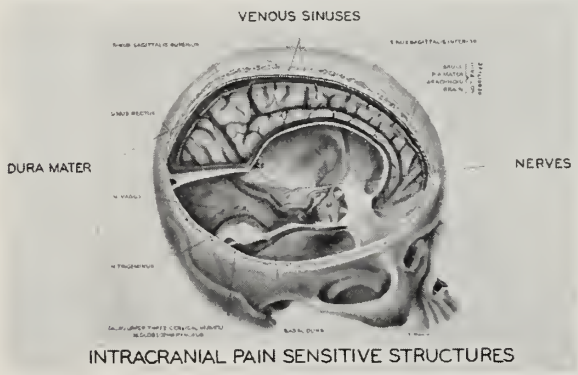
During the Renaissance Leonardo da Vinci and Michelangelo in their paintings and sculpturing made a vital contribution to anatomic medicine as well as to art. The former was the first artist to attain a sound and complete mastery of anatomy. He also conjectured the circulation of the blood and the functioning of the eye in vision.

In 1543 Andreas Vesalius, a scholar and physician, published a book which was the precursor of modern anatomy. When only 22 he was made professor of anatomy at the University of Padua, and when 28 he produced "De Corporis Humani Fabrica," which had remarkable medical illustrations. In 1943 anatomists all over the world observed the four-hundredth anniversary of the publication of his great book.

From the seventeenth century to the nineteenth century illustrations increased in quantity and quality. Medical knowledge was enormously advanced by handsomely engraved steel and copper plates.

Max Brödel founded the first school for art as applied to medicine in 1910 at Johns Hopkins Medical School. Members of his alumni now head the other three schools, one at the University of Illinois in Chicago, another at Southwestern Medical College in Dallas, Texas, and still another at the Massachusetts General Hospital in Boston.

Mr. Brödel arrived in Baltimore, January 18, 1894 and started to work with Dr. Howard Kelly of Johns Hopkins in the field of gynecology. One of his first drawings was a case of prolapsus. He was a man who insisted on seeing and examining for himself. When Dr. Kelly wanted information about the blood supply of the kidneys, Mr. Brödel would go to autopsies and to the pathology laboratory for investigation.


VENOUS SINUSES
SINUS SAGITTALIS SUPERIOR
SINUS SAGITTALIS INFERIOR
SINUS RECTUS
DURA MATER
NERVES
N. VAGUS
N. TRIGEMINUS
BASAL DURA
INTRACRANIAL PAIN SENSITIVE STRUCTURES

An Example of Medical Illustration by the Author

Mr. Brödel through his consummate skill and research made available drawings of organs which explained their anatomy to the scientist with exactness and beauty. His illustrations contributed to surgery an accurate representation of its mechanism so that it might be of direct teaching service.

When Max Brödel died, October 26, 1941, he left as a heritage a significant contribution to medicine. He had revolutionized medical illustration; he had trained nearly two hundred men and women as well as some physicians, including Dr. Harvey Cushing.

Dr. Harvey Cushing occupied himself during his lectures at Yale making drawings of crystals, chemicals and anatomy. At a later date at Harvard he showed artistic skill. While in Baltimore at Hopkins between 1890 and 1900 he learned from Mr. Brödel the technic of medical art, and as a result of his tutelage Dr. Cushing illustrated his own surgical papers.

The qualifications and training of a medical artist can best be comprehended by taking a look into a school for medical artists, such as at Johns Hopkins, now under the directorship of Miss Ranice Birch, a pupil of Max Brödel. As a director she brings a high degree of academic background, since before studying with Mr. Brödel she was a graduate of Connecticut College for Women where she majored in fine arts and received a foundation in the premedical sciences.

Since no medical illustration can be accurately drawn without knowledge of anatomy and the structure of tissues, students spend their first semester with the regular medical students in the study of anatomy and in dissecting a cadaver. Having an adult and infant to dissect gives them a scheme of developmental anatomy as well as a foundation for work in pediatrics. As they dissect the muscles of the thorax and abdomen and the other parts of the human body they make drawings of each step with colored pencils. In their study of osteology they model out of plasticine the various vertebrae of the axial skeleton. Drawings of the vascular, digestive, nervous, and urogenital systems of the body are sometimes made on thin tracing paper, and each group is fastened together in such a manner that they can be used as transparencies to help give a three-dimensional concept of relations.

With a thorough understanding of anatomy the medical art students begin to learn to master the various art media. Their beginning project is usually a tone drawing of a bone which teaches perspective and shade gradation. This is followed by making copies of Mr. Brödel's work, since instruction in drawing follows closely the Brödel method. To acquire the soft, life qualities of tissue the student working on a tone drawing applies carbon dust, scraped from a carbon pencil, with soft oil paint brushes to ross board and blends the tone qualities of the subject to give the feeling of depth. The ross board is of such a composition that it allows the artist to use a carbon pencil and draw in the sharp, dark details or to use a scratcher and scrape out areas that need white for contrast. Along with this medium they learn to develop a skill in handling pen and ink on scratchboard. This medium does not have the plastic qualities of a tone drawing, but it is useful for medical illustration because a doctor can derive a great deal of explanatory analysis from a diagram. As the students develop the different media they also learn to draw from specimens which are taken from the autopsy room, surgical instruments, gauze, and rubber gloves so that they can create for themselves a medical problem given to them without having to copy.

The student medical illustrators also begin training in moulage and learn to make wax and plaster casts of hands and faces of patients in the hospital who have skin lesions and pathologic conditions. If a patient has the skin lesion of lupus erythematosus on his hands the student will color on the fingers of the wax model a purplish blush which is characteristic of intensely erythematous areas.

After a patient with a breast carcinoma has had the primary growth and its extension excised completely, a breast can be modeled out of plasticine and a final cast made of it with plastic materials that will have the natural coloring of skin and will cover the area included in the operation.

In photography the future medical artists are given a background of the chemistry and physics involved in taking and processing a picture as well as a working knowledge of the speed graphic, graflex, and view camera.

The advanced medical art students spend a period in each of the various services as do the medical students. During their period in surgery they learn to sketch hastily while the surgeons proceed with their operations. They begin their study of ophthalmology by painting in water color the external eye with the palpebrae and the lacrimal apparatus. With an ophthalmoscopic examination they observe the retina with particular concern to the vessels of the retina, the optic disk, and the macula. If ophthalmoscopic examination reveals white or yellow exudates near the macular region, punctate hemorrhages, and maybe a degree of vascular degeneration, the patient has diabetic retinitis. In arteriosclerosis the artist must be able to show with color the arteries without their normal translucency, to portray them exerting an abnormal pressure on the veins so that the blood flow is obstructed, and also to delineate how the veins sometimes appear to be pushed aside by the crossing artery. Here the artist must have keen observation, since a fraction of an inch in the size of the vessels or degree of color is the difference in diagnosis of the ailment of the patient.

The student also learns to use the slit lamp, which allows him to view the iris under great magnification. This is particularly helpful, since high vascularity renders the iris subject to iritis and this as well as other disturbances can be diagnosed with magnification.

A patient who has a detachment of the retina will need an operation to reattach the retina. This opens a new field to the artist because in ophthalmic surgery the instruments and procedure are different than in general surgery. Multiple electropunctures of the sclera are made resulting in the development of adhesions which bind the separated retina to the choroid.

In pathology the medical artist spends time making detailed drawings of specimens which are usually organs removed after surgery or an autopsy. As in a case of epithelioma of the cervix uteri research would involve microscopic drawings of the tissue showing the most extreme irregularities in the form of the cells.

A medical art student in the obstetric instruction period learns to recognize the mechanism of labor in a face, brow, and breech presentation. If the case calls for a cesarian section, sketches of procedure will begin when the obstetrician makes an incision 15 centimeters long in the linea alba, beginning just below the umbilicus. Then drawings continue to show the child seized by one foot and extracted from the uterus, and the closing of the uterine and abdominal wounds by suturing the peritoneum, muscles, fascia and skin in separate layers.

For those foreign students who have come from all over the world, including Australia, England and Canada, to study at Hopkins, Miss Birch gives training that can be adjusted to their own countries if they choose to return to develop the profession. Miss Birch helped to form the recently organized Association of Medical Illustrators, eligibility for which requires several years of professional service.

Now let us take a look at a medical illustrator after she has completed her training and let us follow her on professional call. Miss Eula Smith has been requested by a medical society to prepare an exhibit pertaining to ophthalmology for a medical conference. She is assigned the construction of an external eye about 25 times its normal size portraying accurately the morphology of the sense organ. If the eye was to have been natural size, Miss Smith would have painted a picture in water color of the eye, but having to work with such magnification a different medium was required. Applying her ingenuity she decided to utilize several media and construct an eye of papier-mâché, which would possess a three-dimensional quality.

Understanding how occupied the physicians of this medical society were attending to patients, Miss Smith made arrangements to carry out her own research. She went to a hospital where she made sketches of external eyes in the eye clinic. Then having a patient sit down at the slit lamp she was able to draw a detailed study of the iris, the most anterior portion of the vascular tunic, and to make color samples. Miss Smith then studied from textbooks of anatomy and from the reports in the *Archives of Ophthalmology* on measurements of the cornea and the area covered by the sclera and the iris.

Having compiled the medical data Miss Smith sculptured an eye with plasticine and confirmed its accuracy with an ophthalmologist before the eye took on its final stage. This last step required making a papier-mâché cast from the sculptured model out of strips of paper, held together with paste, to form several layers which when painted would be fine enough to pick up the detail of the iris and yet sturdy enough to hold shape. When the paper cast was dry she painted on the eye the various accessory organs, conjunctiva, sclera, pupil and iris.

While this sizable eye was being used for educational purposes in preventive medicine Miss Smith was called upon by a surgeon to make sketches in an autopsy room of a child who died after an exploratory operation with a microcolon, a condition recorded but few times in medicine. On the basis of her sketches she completed a pen-and-ink drawing that illustrated the intestinal obstruction and the paper written by the doctor for a medical journal.

Although medical illustration had its inception in a much less exact form centuries ago, just like medicine itself, it has kept pace with all modern phases of both the medical and artistic world in this day when development of atomic science has loomed on the horizon. The modern doctor finds the medical illustrator an almost indispensable adjunct in the classroom, the research laboratory, the surgery and the hospital. Rapid advances have been made during these seven years since an editorial appeared in the *American Artist*, December 1941, expressing the opinion that "the number of hospitals employing a staff artist is still small but increasing rapidly. A hospital that has from two hundred to three hundred beds will have enough work for at least one full-time medical artist."

4700 Connecticut Avenue, N.W.

GEORGE WASHINGTON UNIVERSITY SPEECH CLINIC

The George Washington University Speech Clinic offers assistance with such speech difficulties as articulatory problems, lisping, cleft palate speech, foreign accents, voice quality disorders, and stuttering. Both children and adults are students in the clinic. Individual as well as group lessons are given.

Recordings are made of the student's voice at regular intervals so that he may better understand his speech problems and his progress. If a hearing loss is suspected, an audiometric test is given. If the case warrants, the student may be advised to see a specialist such as an orthodontist, otologist, laryngologist, psychologist, psychiatrist, etc.

With the postoperative cleft-palate cases the purpose of the treatment is to strengthen the muscles of the soft palate; teach the student to push the air stream out through the mouth opening, to increase flexibility and control of the tongue, lips and other articulators; teach the student to hear the difference between his own and the correct speech sounds and how to produce the correct sounds. Treatment is begun after the final operation and at a time designated by the physician. Typical clinic exercises for this type of problem include: blowing up ordinary toy balloons, and blowing ping pong balls across the table, using a cold mirror under the nostrils to determine whether too much air is escaping through the nasal passage.

The Speech Clinic is located in Lisner Auditorium, corner of 21st and H Streets, N.W. It is a division of the Speech Department under the chairmanship of Professor L. P. Leggette. The Clinic

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REED AND ROSS HONORED BY INTERNATIONAL CONGRESSES

The Honorable George C. Marshall, Secretary of State, gave the opening address before more than twelve hundred delegates and members of the Fourth International Congresses on Tropical Medicine and Malaria, who gathered in the Departmental Auditorium, May 10, for the first Plenary Session. Dr. Leonard A. Scheele, Surgeon General of the United States Public Health Service, presided. Dr. Scheele was later elected President of the conference.

The scientific program was divided into twelve sectional meetings. Convener of Section 1, on Research and Teaching Institutes, was Dr. Wilbur A. Sawyer, Executive Secretary of the Congresses. Dr. Willard H. Wright and Dr. Eloise B. Cram, of the National Institute of Health, presented a paper on "Wartime Research in Human Schistosomiasis" before Section 6, on Helminthic Diseases. Dr. Cram is an Associate member of the District Medical Society.

Conducted tours took visitors to the Agricultural Research Center at Beltsville, Maryland, to the National Institute of Health and the Naval Medical Research Institute, in Bethesda, and to the Army Medical Department Research and Graduate School, in Washington. Scientific and commercial exhibits were held in the Hall of Nations of the Washington Hotel. The official languages of the Congresses were English, French, and Spanish.

Two special commemorative programs were held during the week, one in honor of Major Walter Reed for his discovery in 1900 of the mosquito transmission of yellow fever, and the other in recognition of the fiftieth anniversary of the discovery by Sir Ronald Ross, of Great Britain, of the method of transmission of malaria.

Dr. Fred L. Soper, Director of the Pan American Sanitary Bureau, presided at the Reed program, May 12. He introduced the principal speaker, Dr. Philip S. Hench, of the Mayo Clinic, who gave a most instructive and dramatic account of the achievements of Major Reed and his colleagues, who proved conclusively during the epidemic of yellow fever in Cuba in 1900 that it was spread by the mosquito known as aedes aegypti. Dr. Hench illustrated his talk throughout with slides made from contemporary pictures, cartoons and letters.

Among the honored guests at this program were Mr. J. L. Hanberry, of Orangeburg, South Carolina, one of the last survivors of the experiments performed on volunteers by Major Reed; Brigadier General Jefferson R. Kean, grandson of Thomas Jefferson, who was then chief surgeon of the Army of Western Cuba with the rank of Major; Brigadier General Albert E. Truby, a colleague and friend of Major Reed, who has just published a book on Walter Reed, giving his personal memoirs; Major General Walter Laurence Reed (retired), son of Dr. Reed, who was a second lieutenant in Cuba at the time of his father's work; Major General Merriette W. Ireland, former Surgeon General of the Army and a young medical officer in Cuba at the time of the experiments; and Miss Blossom Reed, a daughter.

General Ireland, Dr. Hugh S. Cumming and Dr. Walter A. Bloedorn were among the committee members who assisted Colonel Joseph F. Siler and Dr. Sawyer in planning the Walter Reed celebration.

Special ceremonies in honor of Dr. Reed were also held on the New York University Heights Campus, May 20, when a bronze bust was permanently installed in the Hall of Fame for Great Americans. Dr. Reed, who was elected to this honor in 1945, thus became the first alumnus of New York University to be so honored. The bust of Dr. Reed, sculptured by Cecil Howard, was unveiled by his son, General Reed. It was donated to the University by the American Society of Tropical Medicine and officers of the Army Medical Corps. Speakers at the exercises included Dr. Harry Woodburn Chase, Chancellor of New York University, Brigadier General George E. Armstrong, Deputy Surgeon General of the Army, and Dr. Sawyer, Executive Secretary of the Congresses, which had just concluded.

At the Ross meeting, May 14, Professor G. MacDonald, Director of the Ross Institute, London, was chairman. In an oration by the distinguished Sir Malcolm Watson, former Director of the Ross Institute, the outstanding events of Ross's life and experiments were described, which culminated between 1897 and 1898 in the discovery that malaria was spread by the anopheles mosquito.

Sir Malcolm closed his oration with "what has been described by a poet as one of the loveliest things ever written in English," Ross's poem:

THE STAR

"Far across the Loneland, far across the Sea,
Far across the Sands, O silver shining,
Sister of the Silence, Sister of the Dew,
Sister of the Twilight, lighten me.

"Ever art thou beaming, I, with eyes upcast,
Gazing worn and weary from this Dark World,
Ask of thee thy Wisdom, steadfast Eye of God,
That I be as Thou art while I last."

Due to the efforts of Dr. Soper, Chairman of the Entertainment Committee, and to Dr. Cram, Vice Chairman in charge of entertainment for the ladies, social activities were not neglected. An official reception for delegates and members was held by the Department of State at the Pan American Union, May 10. The Harvard School of Public Health was host at a garden party at Dumbarton Oaks on Saturday afternoon, during which music was furnished by the United States Marine Band and vocal selections by the Howard University Choir. Many visitors enjoyed the boat trip to Mount Vernon on Sunday morning, and participated in brief wreath-laying ceremonies at the tomb of George Washington.

Mrs. Truman received women delegates, wives of members, and other guests at a White House tea, May 13, following which a buffet supper was given for foreign professional women attending the Congresses at the home of Dr. Fredericka Cobey. Dr. Cobey entertained for Branch 1 of the American Medical Women's Association.

Among those who assisted in plans for the entertainment of women guests were Mmes. Raymond W. Bliss, Tomas Cajigas, William A. Howard, William L. Howell, Albert W. Kenner, Robert E. Moran, Thomas Parran, Leonard A. Scheele and Fred L. Soper, and Dr. Elizabeth Parker. Dr. Cram was also chairman of the Women's Hospitality Committee, and Miss Ruth V. Reed, of the Pan American Sanitary Bureau, liaison with the committee.

The conferences closed with a dinner at the Mayflower Hotel, May 17, at which two awards were presented. The French Laveran prize for research into malaria was given to Dr. Henry E. Shortt, Professor of Protozoology at the University of London, and the Walter Reed Medal to Dr. N. H. Swellengrebel of the Amsterdam Institute of Tropical Medicine.

Dr. Scheele, Chairman of the Organizing Committee, and Dr. Sawyer, Executive Secretary of the Committee, began planning for this assembly more than a year ago. Representing the Medical Society on the Organizing and Entertainment Committees was Dr. William L. Howell. Dr. Tomas Cajigas, together with a number of other District Society members, arranged for medical services to foreign visitors.

Delegates from 41 countries registered for the convention. Among the 23 official delegates appointed by medical organizations to represent the United States were Dr. George F. Lull, the American Medical Association; Dr. Arnold McNitt, the Southern Medical Association; Dr. Henry A. Monat, the National Gastroenterological Association; and Dr. Worth B. Daniels, the Medical Society of the District of Columbia. Dr. Oscar B. Hunter and Dr. Eugene R. Whitmore represented Dr. Lull at the Congresses. The District Medical Society's representatives were Drs. Hunter, Roger M. Choisser and Harold J. Jeghers.

Assisting the Department of State in sponsoring the Congresses were six Governmental agencies: Bureau of Medicine and Surgery of the United States Navy, Department of Agriculture, Institute of Inter-American Affairs, Office of the Surgeon General of the U. S. Army, United States Public Health Service, and the Veterans Administration. The following professional organizations also cooperated: The American Academy of Tropical Medicine, American Association for the Advancement of Science, American Association of Economic Entomologists, American College of Physicians, American Dermatological Association, American Medical Association, American Public Health Association, American Society of Parasitologists, American Society of Tropical Medicine, American Veterinary Medical Association, Entomological Society of America, Medical Society of the District of Columbia, National Malaria Society, National Research Council, and the Southern Medical Association.

PRINCIPLES OF EARLY MANAGEMENT OF HAND INJURIES*

Editor's Note: Upon the recommendation of the American Society for Surgery of the Hand to the American College of Surgeons that a knowledge of the correct principles of early treatment in injuries of the hand be disseminated as widely as possible, the College's Committee on Fractures and Other Traumas voted that the Society be asked to prepare for the Committee's approval a presentation of the Principles of Early Management of Hand Injuries. The material will be submitted in several sections at intervals, of which the first, on General Principles of Protection, follows.

Following injury, the hand is particularly susceptible to the development of complications leading to serious disabilities. For this reason it is important that the freshly injured hand be given the nost careful protection against such complications as result from added infection, additional tissue damage, and stiffening.

The principles governing the provision of this protection may be briefly stated as follows:

Protection against added infection. Any open accidental wound of the hand may be assumed to be contaminated. It is important that no additional infection be added. This requires

a. Protection of the wound at once with a sterile dressing.

b. Avoidance of putting anything into the wound, such as instruments, gauze, applicators, sponges or any sort of antiseptic.

c. If any cleansing of the areas around the covered wound is done, it should be with soap and water only.

d. Avoidance of all efforts at treatment of the wound by exploration, débridement or repair of damaged structures until adequate facilities are available. Adequate facilities for this purpose should include a location where surgically aseptic technic is employed, adequate anesthesia, proper instruments, sufficient assistance, good lighting and the provision of a bloodless operative field.

e. Application of a sterile dressing which will protect against the entrance of foreign material. Such a dressing should be voluminous, firmly applied with moderate pressure, separating the fingers from each other, and should maintain the hand and fingers in the position of function.

f. Antibiotic drugs should be administered systemically, not locally, in full dosage. Tetanus antitoxin (or toxoid) should be administered when the conditions warrant.

Protection against added tissue damage and deformity. Immobilization of the hand is required in any major injury, whether the wound involves skin, tendons, nerves, joints or bones. Immobilization should be governed by the following principles:

a. Immobilization should be employed as soon as possible after receipt of the injury for protection from further tissue damage.

b. Following definitive treatment of the injury, the immobilization should be continued as long as may be required for healing to occur.

c. Immobilization should be in the position of function (position of grasp) in order to maintain optimum relation of bone fragments and of soft tissue structures.

d. The position of function in immobilization is necessary to prevent disabling deformities, contractures, muscle weakness and joint stiffening, and to insure the earliest return of usefulness after healing.

e. Flat splinting of the hand or any of its digits must be avoided at all times.

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* This article was submitted to the editor, April 6, 1948, by Dr. Leonard T. Peterson, who is a member of the Committee on Fractures and Other Traumas of the American College of Surgeons.

WARWICK CLINIC AFFILIATES WITH GEORGE WASHINGTON HOSPITAL

The Warwick Memorial Clinic for Cancer and Allied Diseases is now affiliated with the George Washington University School of Medicine and the George Washington University Hospital. On June 25, 1948, the Clinic moved its facilities from the grounds of Garfield Memorial Hospital to 1339 H Street, N.W. (the old George Washington University Hospital building).

The Warwick Memorial Cancer Clinic will function as previously outlined in the Annals (1947, **16**, 41). Any patient having or suspected of having a malignant tumor is eligible for care in the Clinic. The outpatient facilities will be housed at 1339 H Street, N.W. Appointments can be made and information obtained by calling Sterling 7950.

The new George Washington University Hospital will be available for cancer patients requiring roentgen therapy, who will be treated in the X-ray Department. By virtue of the affiliation, 425 milligrams of radium and a complete set of radium applicators are available for patients requiring radium therapy. Those who require hospitalization will be cared for in the new hospital whenever possible.

The Warwick Clinic will serve as the nucleus of the cancer program of George Washington University School of Medicine. Grants by the U. S. Public Health Service and the American Cancer Society are being used to carry on educational and research projects. These funds were considerably augmented on June 14 when a check for $50,000 was received by the University from the American Cancer Society. The service program of the Clinic is aided by grants from the District of Columbia Division of the American Cancer Society and by endowment funds of the Washington Home for Foundlings.

The staff of the Warwick Clinic is made up of members of the faculty of the George Washington University School of Medicine. Staff members are appointed to specific subdivisions of the Cancer Clinic in accordance with their special training. Close affiliation is maintained with the National Cancer Institute, several of whose staff participate in the research activities.

A special eye tumor clinic has been established within the Cancer Clinic, known as the Woodward Memorial Eye Clinic. This clinic, which was established and is supported by gifts from the daughters of Mrs. S. W. Woodward, is completely equipped and will undertake not only the routine care of eye cancer cases, but research in the field.

NAVY'S NEW MEDICAL TRAINING PROGRAM

The Surgeon General of the Navy has announced the expansion of the Bureau's professional training program for reserve and regular medical officers, which is similar to the recently expanded Army medical training program. The object is to permit more Navy doctors to meet the requirements for certification by the various American Specialty Boards, and to encourage the young doctor to intern under the auspices of the Navy. The following are the important points in this program:

Graduates of Class A medical schools who have been accepted for internship by a hospital approved for such training by the Council on Medical Education and Hospitals of the AMA may be commissioned as lieutenants (junior grade), M.C., U.S.N.R., and permitted to continue their intern training. They will receive all the pay and allowance of the rank while so serving. After completing their internships, the medical officers must remain on active duty for a period of one year. If they meet the professional, physical and moral requirements, they will be given every encouragement to transfer to the regular Navy.

Interns who have completed the one year of obligated service, and who have transferred to the regular Navy, may be considered for residency training on a competitive basis with other officer personnel of the regular Medical Corps.

Resident physicians now in civilian hospitals, or those accepted for approved residency training, are eligible for commissions in the regular Navy. Those so commissioned will be assigned to duty, with full pay and allowances, in the hospital in which they are already a resident, or to which they have been accepted for residency training. Every attempt will be made to permit residents holding commissions in the regular Navy to complete their training in event of an emergency.

The Navy has at the present time 400 approved residencies and fellowships in the various specialties recognized by the American Specialty Boards in Naval and civilian hospitals. This educational training involving the 400 residencies is divided into 2 programs:

Program A: One hundred of the above-mentioned residencies, courses, and fellowships will be made available for civilian physicians accepting a commission in the U. S. Navy. An additional 100 civilian physicians will be commissioned in the U. S. Navy and permitted to pursue their own course, fellowship or residency, provided it is approved by the Council on Medical Education and Hospitals of the American Medical Association with concurrence of the Specialty Board. Upon acceptance of the designated training, they will be required to agree

(*Continued on page 428*)

News and Personals

The Southern Medical Association convenes for its 42nd annual meeting, October 25–28, in Miami, Florida.

The American College of Physicians announces that a limited number of Fellowships in Medicine will be available from July 1, 1949 to June 30, 1950. These Fellowships are designed especially for physicians who are in the early stages of their preparation for a teaching and investigative career in internal medicine. Assurance must be provided that the applicant will be acceptable in the laboratory or clinic of his choice and that he will be provided with the facilities necessary for the proper pursuit of his work.

The stipend will be from $2,200 to $3,200. Application forms will be supplied on request to The American College of Physicians, 4200 Pine Street, Philadelphia 4, Penna., and must be submitted in duplicate not later than November 1, 1948.

The Section on Radiology will be host to the **Eastern Conference of Radiologists** in Washington, March 11 and 12, 1949, with headquarters at the Hotel Statler. Clinical sessions with panel discussions will be held at Walter Reed General Hospital, the Naval Medical Center, Bethesda, Mount Alto Veterans Hospital, the National Cancer Institute, X-ray Division of the Bureau of Standards, and Georgetown, George Washington, Doctors and Garfield Memorial Hospitals. Program and date of registration will be announced about December, 1948.

CALENDAR OF MEETINGS

June 3	Section on Anesthesiology
	Committee on Public Meeting, Annual Scientific Assembly
June 4	Section on Radiology
	Finance Committee, A.S.A.
	Executive Committee, Washington Metropolitan Health Council
June 6	Washington Gynecological Society
June 7	Committee on Medical Care in Public Institutions
	Committee on Arrangements, A.S.A.
June 8	Committee on Industrial Medicine
	Committee opposed to anti-vivisectionists
	District Dental Society
June 9	Physician-Veterans of World War II
June 10	Committee on Special Exhibits, A.S.A.
June 11	Membership Committee
	Section on Radiology
June 14	Committee on Medical Care in Public Institutions
June 15	Committee on Attendance, A.S.A.
June 16	Committee opposed to anti-vivisectionists
June 21	Committee on Medical Care in Public Institutions
	Graduate Nurses' Association
June 22	Subcommittee on Industrial Medicine
June 28	Executive Board
	Board of Censors
	Committee on Industrial Medicine
	Commitee on Medical Care in Public Institutions

The Veterans Administration has in its custody the majority of syphilis records of those Army personnel who were treated for this disease while in active service, and in many instances can procure informative data from the syphilis records of other than Army personnel. It is thought that many physicians treating veterans for syphilis as private patients would find a résumé of the syphilis record useful since the details of treatment, results of spinal fluid examinations, and blood serologies are incorporated in the records.

Résumés of these records are available to physicians who are treating such veterans provided authorization for the release of the data is given by the veteran. Requests for the résumés accompanied by an authorization for the release of the data, dated and signed by the veteran, should be addressed to the Dermatology and Syphilology Section, Veterans Administration, Munitions Building, Washington 25, D. C. It is most important that the veteran's Service Serial Number and other identifying information, such as the date of enlistment, the date of discharge, rank, and organization be included.

Ordinarily, the résumés can be furnished in approximately two weeks from the date of the receipt of the request and signed authorization.

Approximately 185 educators, state board and state association officials, and other members of the drug industry were called to Washington, May 6 and 7, by the **American Pharmaceutical Association.** The meetings dealt with pharmaceutical services in relation to any future national emergency, and the profession's relation to the Nation's health needs in either peace or war.

A national memorial "to all pharmacists who served in the wars of our country" was dedicated in ceremonies in front of the Association's building on Constitution Avenue, May 7. Dr. H. A. B. Dunning, of Baltimore, former President of the Association, donated the memorial, which is a sculptured bronze drum, depicting pharmacists' services in wartime, holding aloft the white shaft bearing the United States flag. The memorial was accepted by Dr. Robert P. Fischelis, Secretary and General Manager of the Association. The principal speaker was General J. Lawton Collins, deputy chief of staff of the Army, who appeared on behalf of Secretary of the Army Kenneth Royall.

Presiding at the morning session, May 6, was Dr. George D. Beal, Chairman of the A. Ph. A. Council. Dr. Detlev W. Bronk, Chairman of the National Research Council, was the first speaker. Addresses followed by Rear Admiral C. A. Swanson, Surgeon General of the Navy; Major General R. W. Bliss, Surgeon General of the Army; and Major General Malcolm C. Grow, the Air Surgeon.

J. Donald Kingsley, Assistant Administrator of the Federal Security Agency, reviewed the accomplishments of the National Health Assembly during the afternoon session. Other speakers were Dr. Leonard A. Scheele, Surgeon General of the U. S. Public Health Service; Dr. Philip S. Owen, Executive Director of NRC's Committee on Atomic Casualties; Dr. Ross T. McIntire, Administrator of the National Blood Program; Major General Lewis B. Hershey, Director of the Office of Selective Service Records; and Dr. Richard L. Meiling, Secretary of the Council on National Emergency Medical Service.

The American Board of Obstetrics and Gynecology announces that the next scheduled examination (Part 1) will be held in various cities of the United States and Canada on February 4, 1949. Application may be made until November 1, 1948.

At the annual meeting of the Board, held in Washington, May 16–22, 231 candidates were certified and a number of changes in Board requirements and regulations were made. Foremost among the regulations, which relate both to candidates and to hospitals conducting residency services for training, are the following:

1. The ruling that applicants must receive adequate training in both obstetrics and gynecology has been defined as meaning a minimum of 6 months, full time, in the branch of either obstetrics or gynecology relegated to a minor role in a candidate's training and preference for practice.
2. Acceptable preceptorship training is defined.
3. The present regulation requiring at least 6 months of practice in the specialty following the completion of an acceptable training period has now been extended, effective December 31, 1949, to a requirement of two years' post-training practice limited to the specialty.
4. Specific requirements for approval of hospital services for residency training are outlined.
5. Effective immediately, there will be no further temporary approvals of hospital services for residency training. It is planned that all hospitals holding any type of residency training approval will soon either be resurveyed or initially surveyed by the Council on Medical Education and Hospitals of the AMA so that all future approvals, new or old, will be based entirely upon inspection following application. It is expected also that certain resurveys will result in withdrawal of present residency approval from institutions where the educational and training standards are not being maintained.

Application forms for examination and bulletins giving details of the new regulations may be secured by writing to the American Board of Obstetrics and Gynecology, Inc., 1015 Highland Building, Pittsburgh 6, Penna.

The Washington Medical and Surgical Society held its annual banquet at Hotel 2400 on May 24. Dr. Leo B. Gaffney, President of the Society, presided.

Congressman Walter H. Judd of Minnesota, who gave the principal address, outlined plans for the

European recovery program and discussed the international political picture.

A feature of the program was the presentation of the annual Frank E. Gibson Award for the best essay presented before the Society during the year. The recipient was Dr. Frederic C. Burke, who is on the surgical staff of Children's Hospital, for his paper on "Pediatrical-Surgical Problems." Dr. Beveridge Miller, Chairman of the committee which selected the winner, made the presentation speech. The certificate and check were presented by Dr. Frank E. Gibson, permanent Treasurer of the Society, for whom the Award is named.

Theodore Wiprud, Secretary of the Medical Society, and Mrs. Wiprud were among the guests. Dr. Clyde P. Reeves was in charge of the banquet.

The spring meeting of the **Section on Otolaryngology** was held, June 9, at the Chevy Chase Club, where dinner was served to approximately 35 members and guests. Dr. Joseph Kendler, of Baltimore, presented a paper entitled "Thyrotomy in Cancer of the Larynx."

The following officers were elected for 1948–49:

Dr. James P. Lyons, *Chairman*; Dr. Don Knowlton, *Vice Chairman*; Dr. Victor R. Alfaro, *Secretary*; Dr. Irving Feldman, *Treasurer*.

The Section on Anesthesiology and the Potomac Society of Anesthesiologists held a joint meeting, June 3, in the Society's auditorium. Drs. Edward B. Macon and Donald Stubbs were co-authors of a paper on "Asphyxia: Report of Two Cases," presented at the meeting. New officers of the Section were elected as follows:

Dr. Macon, *Chairman*; Dr. Stubbs, *Vice Chairman*; Dr. Charles E. Fierst, *Secretary-Treasurer*; Drs. Jesse T. Mann and J. Phelps Hand, *members of the Executive Committee*.

The Potomac Society, which met to elect officers and adopt a Constitution, plans to request affiliation with the American Society of Anesthesiologists. The first officers elected were:

Dr. Joseph B. Bogan, *President*; Dr. Macon, *President-elect*; Dr. Stubbs, *Vice President*; Dr. Fierst, *Secretary-Treasurer*.

Following the program and election of officers, a buffet supper was enjoyed in the Library.

NOTICE TO NEW MEMBERS

The books of Group Hospitalization, Inc. will be open again to new subscribers during the month of August. Application blanks may be secured by calling the Society's office, District 3111, and should be completed and in the hands of the Treasurer of the Society no later than August 20.

The Section on Radiology invited members of the District Medical Society to attend its meeting, June 11, when Dr. Elis Berven, Director of Radiumhemmett in Stockholm, Sweden, was guest speaker. Dr. Berven, who is recognized throughout the world as an authority on radiotherapy, was invited to the United States by the American Radium Society. He spoke before the Section on "Experiences in the Treatment of Cancer of the Breast at Radiumhemmett."

On June 4, Dr. A. S. Macmillan, Chief Radiologist of the Boston Eye and Ear Infirmary, addressed the Section and guests on "Radiological Aspects of Disease of the Sinuses, Mastoid and Esophagus."

Members of the **Women's Medical Society** were entertained at a picnic supper, May 22, at Lebanon, the home of Dr. Elizabeth Parker in Lorton, Virginia. Present for the occasion was Dr. Mabel E. Gardner, of Middletown, Ohio, President of the National Medical Women's Association, who gave a brief talk in which she enumerated the three fields of medicine in which women have pioneered: obstetrics, which had its beginnings in midwifery, contraceptives and cancer.

The following officers were elected to serve for the coming year:

Dr. Carolyn Pincock, *President*; Dr. Caroline Jackson, *First Vice President*; Dr. Josephine E. Renshaw, *Corresponding Secretary*; Dr. Dorothy B. Holmes, *Recording Secretary*; Dr. Elizabeth S. Kahler, *Treasurer*.

Mr. J. Richard Connelly, Assistant Secretary of the District Medical Society, Mrs. Connelly, and Miss A. Louise Eckburg, Executive Clerk of the Society, were among the guests.

On May 24, Dr. Kain accompanied Dr. Gardner to New York to attend a reception at the Cosmos Club given by Dr. Elise L'Esperance, President of the American Medical Women's Association, in honor of Dr. A. Charlotte Ruys, of The Netherlands, President of the International Medical Women's Association. Dr. Ruys was a guest of Dr. Pincock while attending the International Congresses on Tropical Medicine and Malaria in Washington the week of May 9. Dr. Ruys presented a paper on leptospirosis before the Section on Bacterial and Spirochetal Diseases, May 14.

The District of Columbia Pharmaceutical Association elected and installed new officers during its annual convention, June 2 and 3, at the Shoreham Hotel. Harold C. Kinner was elected President, and John E. Donaldson succeeded Mr. Kinner as Secretary. Roger W. Lusby continues as Treasurer. The office of the Association has recently been moved from 33 N Street, N.E. to 6418 8th Street, N.W., and has a new telephone number, Georgia 3365.

At the banquet in honor of the new officers, June 3, Theodore Wiprud, Secretary of the District Medical Society, and Mrs. Wiprud were among the honored guests. Other guests of the Association included Dr. Robert P. Fischelis, Secretary of the American Pharmaceutical Association, Dr. and Mrs. Karl H. Wood, representing the District Dental Society, Health Officer and Mrs. George C. Ruhland, and the 1948 graduating class of George Washington University School of Pharmacy.

The Society's Speakers' Bureau was asked to secure speakers recently for two civic groups. **Dr. Julius Schreiber and Dr. Leonard M. Dub** accepted the assignments. Dr. Schreiber discussed "Basic Concepts of Mental Health and the Citizens' Responsibility in Applying Them" before a parent-teachers group at the Health Department of Arlington County, Arlington, Virginia, June 24. Dr. Dub addressed kindergarten mothers of the H. D. Cooke School, May 5, on "Emotional Problems In Your Child's Life."

The Board of Directors of the **Social Hygiene Society** met for election of officers, June 10. All officers were reëlected, as follows:

Dr. William P. Herbst, *President*; Miss Rhoda J. Milliken, *First Vice President*; Mr. Albert W. Atwood, *Second Vice President*; Judge Fay L. Bentley, *Secretary*; Dr. George W. Creswell, *Treasurer*.

The District of Columbia Division of the American Cancer Society reported that the cancer fund drive resulted in raising a total sum of $191,117.16, or $16,000 more than the quota. It exceeded by $74,000 the total raised during last year's campaign.

The Jacobi Society held its annual banquet at the Shoreham Hotel, May 24. Guest speaker was Mr. Robert Nathan, the economist, who spoke on "The Role of American Economy in World Peace." Dr. Samuel M. Dodek, President of the Society, presided.

New officers who will serve during the coming year were announced. They are:

Dr. Leon Gerber, *President*; Dr. Milton M. Greenberg, *Vice President*; Dr. Robert Stolar, *Secretary*; Dr. Carl Silverman, *Treasurer*.

Present as honored guests of the Society were Dr. Rayond T. Holden, President, and Dr. Ivy A. Pelzman, Vice President, of the Medical Society of the District of Columbia.

The meeting was attended by wives of the members, and the dinner was followed by dancing.

J. G. Capossela, Superintendent of Emergency Hospital, and Leo G. Schmelzer, Superintendent of George Washington University Hospital, participated in the recent conference of the **Maryland and District of Columbia Hospital Association** at Frederick, Maryland, May 27 and 28. Mr. Capossela, President of the Association, presided at the dinner meeting, May 27.

Benjamin W. Wright, Superintendent of Memorial Hospital, Cumberland, Maryland, was elected President after Brady J. Dayton, of Salisbury, Maryland, President-elect, resigned. Mr. Wright will assume office in the fall.

Dr. James A. Crabtree has been appointed to the staff of the National Security Resources Board as Director of its Medical Division, where he will serve on loan from his regular position as Deputy Surgeon General of the U. S. Public Health Service.

Dr. Crabtree received his medical education at the University of Tennessee. He is also a graduate of the School of Hygiene and Public Health of Johns Hopkins University, with a Dr. P.H. degree. He has been engaged in public health work since 1926, with the exception of two years spent at Johns Hopkins. Until 1934 he was associated with the Tennessee State Health Organization, after which for four years he was Associate Director of Health and Safety of the Tennessee Valley Authority.

Dr. W. Palmer Dearing succeeded Dr. Crabtree as Deputy Surgeon General as of May 17. **Dr. Eugene A. Gill** was appointed Chief of the Division of Commissioned Officers, the position vacated by Dr. Dearing.

Dr. William Reid Morrison, of Boston, has accepted the post of Chief Consultant in Surgery for the Veterans Administration, according to an announcement by Dr. Paul B. Magnuson, Chief Medical Director. Dr. Morrison, an internationally known surgeon and one of the founders of the American Board of Surgery, has resigned as national surgeon general of the Veterans of Foreign Wars in order to devote more time to the VA's medical program.

Dr. Louis K. Alpert, Associate in Medicine at George Washington University School of Medicine, has been appointed Chief of Medical Service at Mt. Alto Veterans Hospital. He succeeds Dr. Thomas McPherson Brown, who is now Professor of Medicine at George Washington.

Dr. Alpert is a graduate of Yale University School of Medicine, and from 1939 to 1943 was a faculty member at Johns Hopkins. During the War he was Chief of General Medicine and the Cardiovascular Section at Valley Forge General Hospital. During the last two years he has been engaged in private practice, serving on a part-time basis with the Mt. Alto staff. He is a Fellow of the American College of Physicians and a diplomate of the American Board of Internal Medicine.

Dr. Marshall deG. Ruffin and Dr. Philip Litvin were named by the District Commissioners to serve on the Commission on Mental Health, succeeding Dr. Elmer Klein and Dr. Harold Stevens, respectively, who did not desire reappointment. The appointments are for four years, expiring June 7, 1952.

Dr. Ruffin, a graduate of the University of Virginia and Harvard Medical School, has been in practice in Washington since 1941. He served four years in the Army Medical Corps and was discharged with the rank of Major.

Dr. Litvin, who is Associate Professor of Neurology at Georgetown University, received his medical degree from George Washington University in 1929. He also holds a degree in law from Southeastern University. Dr. Litvin held the rank of Lieutenant Colonel at the close of the War, having served in the Army Medical Corps from 1942 to 1946.

Dr. William P. Herbst, Jr. has announced his resignation as Professor of Urology at Georgetown University School of Medicine, effective at the convenience of the School. Dr. Herbst has been a member of the Georgetown faculty for the past fourteen years. During this period he has been Chief of Urology at Gallinger Municipal Hospital.

Dr. Herbst, Past President of the Medical Society of the District of Columbia and now a member of its Executive Board, is civilian consultant at Walter Reed General Hospital, Mount Alto Veterans Hospital, and U. S. Naval Medical Center, Bethesda.

Dr. Edward H. Cushing discussed "The Residency Program in VA Hospitals," June 10, at a joint meeting of librarians in the Biological Sciences and Hospital and Nursing groups during the 39th annual convention of the Special Libraries Association in Washington, June 6–12. Dr. Cushing is Director of the Research and Education Service and Assistant Director of Medical Services of the Veterans Administration and honorary consultant to the Army Medical Library.

Dr. Charles S. Coakley has been appointed Assistant Professor of Anesthesiology at the George Washington University School of Medicine. Dr. Coakley graduated from George Washington University in 1937 and was formerly a fellow in anesthesiology at the Hospital. During the War he served in the Medical Corps of the United States Navy for more than two years.

Two key appointments to the medical staff of **Gallinger Municipal Hospital** have been made by Health Officer Ruhland and confirmed by the District Commissioners. **Dr. Joseph F. Fazekas** is the new Chief Medical Officer, succeeding Dr.

Joseph T. Roberts, who resigned last November to become Dean of the University of Arkansas School of Medicine. Dr. Fazekas is a native of New Haven, Conn. He graduated in medicine from Albany (N. Y.) Medical College and has been on the staff of the Pratt Diagnostic Hospital of Boston. He is a physician-veteran of World War II.

Dr. Brooks G. Brown became Chief Medical Officer in Surgery, July 1, succeeding Dr. Donald Effler, who resigned to join the Cleveland Crile Clinic in March. Dr. Brown, a graduate of the George Washington University School of Medicine (1939), served overseas with the Army Medical Corps from 1942 to 1945. He has just completed two years' residency at the Cleveland Clinic.

Dr. Andrew A. Marchetti presented a paper on "A New Operation for the Correction of Female Stress Incontinence" before the New York Obstetrical Society, May 11. Drs. Victor F. Marshall and Kermit Krantz, both of Cornell University Medical School, were co-authors.

Dr. Edna F. Patterson, formerly Superintendent of the Woman's Clinic, has returned to Washington after serving several years on the staff of the Paradise Valley Sanitarium and Hospital in National City, California. She will again be associated with the Clinic as a staff member.

Additional Society members assisting in the Conferences and Clinics of the National Naval Medical Center at Bethesda are **Drs. Custis Lee Hall, Raymond T. Holden and Karl H. Wood.**

The names of **Drs. William C. Meloy and Thomas M. Leonard** have appeared in recent programs of Professional Staff Proceedings at Walter Reed Hospital.

Dr. James P. Murphy adderssed a meeting of the Prince Georges County Registered Nurses' Association at the Prince Georges General Hospital, Cheverly, Md., May 17.

Dr. Paul J. Kelley is serving as adult adviser to the American Junior Medical Association, a new group of young people in Washington who have banded together for the purpose of stimulating interest in the medical sciences.

Dr. Frank Grabill presented a paper on "The Physiology of Resuscitation" before the Ohio State Medical Society, in Cincinnati, April 13.

Dr. Calvin T. Klopp, Director of the Warwick Memorial Cancer Clinic, participated in a Symposium on the Clinical Morphologic Aspects of Oral Cancer during a conference of the Washington section of the International Association for Dental Research, held in Washington, May 19.

Dr. Murray M. Copeland has been elected an honorary member of the American Academy of Orthopedic Surgeons.

Dr. William L. Granatir, staff surgeon at St. Elizabeths Hospital, has been named temporary Director of the **Washington Institute of Mental Hygiene,** replacing Dr. Sidney Berman, who resigned recently to enter private practice. Dr. Granatir is a graduate of the University of Pennsylvania and Hahnemann Medical College. He served in the Army during the War as a flight surgeon.

Drs. R. T. Morse and Rex Buxton were reëlected to office in the **Washington Psychoanalytical Society,** May 8, Dr. Morse as President and Dr. Buxton as Secretary-Treasurer. **Dr. Alexander Halperin** was elected Vice President.

Prince Georges County will henceforth be serviced by two district medical examiners. **Dr. James I. Boyd,** of Forestville, Md., medical examiner for the County since the office was created, will be medical examiner for the Southern District, and **Dr. John T. Maloney,** Cheverly, Md., will be the examiner for the Northern District.

Theodore Wiprud was reappointed a member of the Traffic Advisory Board by the Board of Commissioners of the District of Columbia for a term of 2 years, commencing July 1, 1948.

Dr. Montgomery Blair, Director of Children's Hospital, **and Dr. Ella Oppenheimer,** Director of the Health Department's Bureau of Maternal and Child Welfare, have resigned from the Board of Directors of the District Society for Crippled Children.

Several members of the District Medical Society will be sojourning in Europe during the summer months.

Dr. Walter Freeman left on the Pan American Airliner, July 5, and will spend two months traveling on the Continent, returning about September 10. While in Europe he will attend the International Conference on Psychosurgery in Lisbon, Portugal, August 3–7, as General Secretary of the Conference. Dr. Freeman was recently appointed corresponding member of the Academy of Sciences of Lisbon.

Dr. James W. Watts will also attend the Lisbon Conference, leaving Washington by plane, July 30, and returning August 10. He will read a paper on "Relief of Unbearable Pain by Frontal Lobotomy" before the Conference.

Dr. James N. Greear flew to Germany, July 14, on temporary active duty as Colonel in the Army Medical Reserve Corps. He will lecture and survey eye services in all Army hospitals in occupied territory in Europe, returning to the United States in the early fall.

Dr. Daniel Blain, Medical Director of the American Psychiatric Association, is in Europe for a two months' stay in Geneva and later London, where he will attend meetings of the World Health Organization and the International Mental Health Conference.

Dr. Wallace M. Yater gave an address on coronary heart disease before the Association of Former Interns of Freedmen's Hospital, June 2.

Dr. Joseph S. Lawrence, Director of the Washington office of the AMA, gave a talk entitled "Washington Horoscope," May 13, before the Sixth Semi-annual meeting of the Middle Atlantic States Regional Conference on Medical Service.

Dr. Joseph W. Stein attended the University of Indiana School of Medicine in Indianapolis, April 17–May 1, for a two weeks' course of study in the anatomy and pathology of the head and neck. Dr. Carl McCaskey was the instructor.

Dr. E. P. Luongo, Medical Director of the General Petroleum Corporation, Los Angeles, has been named a Director of the Western Association of Industrial Physicians and Surgeons, a component society of the American Association of Industrial Physicians and Surgeons. Dr. Luongo has retained his affiliation with the District Medical Society as an Associate member.

Dr. William C. Gwynn and Dr. James A. Flynn received congratulatory citations at Georgetown University's 149th annual commencement, June 14. They were among the twelve graduates of fifty years ago who were so honored.

Dr. Frederick Stohlman, Jr. and Dr. J. Winthrop Peabody, Jr. were joint winners of the **James A. Cahill Award** for the best theses on surgical subjects submitted by seniors of Georgetown University School of Medicine. The awards, first of an annual presentation, were given in honor of the late Dr. James A. Cahill, Jr., Professor of Surgery and Director of the Department of Surgery at Georgetown until his death in 1942. Mrs. James A. Cahill, Jr., presented the awards, which consisted of a check and a medal bearing the likeness of Dr. Cahill.

Dr. Peabody's paper was entitled "The Etiology of the Modern Concept of the Physiological Basis for Shock," and Dr. Stohlman's, "The Pathogenesis of Arterial Hypertension."

BOOK REVIEWS

Treatment in General Practice. 6th ed. HARRY BECKMAN, M.D., Professor of Pharmacology, Marquette University School of Medicine, Milwaukee, Wisconsin. Price, $11.50. Pp. 1129. Philadelphia: Saunders, 1948.

This book is a classic and truly a masterpiece throughout. Every page of it clearly indicates that its author is a refined clinician who is up to date on the newest diagnostic and therapeutic measures, and has the unusual ability of blending his vast knowledge into a logical, coherent, and interesting text.

It offers very enjoyable, and at times exciting reading. A fine bibliography of the newest publications makes it scientifically valuable and stimulating, and very useful also for teaching. Every chapter is excellent, and even the most inquisitive search could show nothing new or important that is missing.

There you can find: The Modern Evaluation of Rest in Therapy; The Use of Mesantoin in Epilepsy; The Value of Air-Conditioning in the Treatment of Congestive Heart Failure; The Use of Dicumarol and Quinidine in Myocardial Infarction; The Use of Para-Amino Benzoic Acid and Salicylates in Rheumatic Fever.

Vagotomy in the treatment of peptic ulcer, lobectomy in bronchiectasis, aerosol therapy in asthma are there, just as are the evaluation of digitalis preparations, folic acid, and also propyl-thiouracil and iodine in hyperthyroidism, etc., etc.

I have no doubt that it will be a medical best-seller, and should be on the desk of every physician.

Frank S. Horvath, M.D.

Successful Marriage: An Authoritative Guide to Problems Related to Marriage from the Beginning of Sexual Attraction to Matrimony and the Successful Rearing of a Family, edited by Morris Fishbein, M.D., Editor, *Journal of the American Medical Association* and *Hygeia, the Health Magazine,* and Ernest W. Burgess, Ph.D., Professor and Chairman, Department of Sociology, University of Chicago. Price, $7.50. Pp. 547, with 16 illustrations. Garden City, N. Y.: Doubleday, 1947.

In this rather bulky volume two of the country's foremost editors in the fields of science have brought together a large amount of information designed to advance popular education for marriage. Dr. Fishbein, best known of medical editors, and Dr. Burgess, equally prominent as an editor of sociologic publications, have taken advantage of the rising tide of public interest in the sexual aspects of our culture to produce a symposium from the pens of 38 professional experts, each of national reputation.

On the jacket of the book is found a suggestion that it is suitable for prescription by physicians as a marriage manual. This is questioned, on the grounds that the volume is both too wordy and too expensive for such purpose. It seems to the reviewer more appropriate to describe the book as a brief encyclopedia, useful principally to professional people and the more highly educated group of married couples. Physicians will find in its pages much valuable information that is neither taught in medical schools nor to be found in medical literature. Experts from many disciplines develop a rounded picture of married living not clearly familiar to the majority of physicians but most desirable for them to visualize accurately.

Part One of the book is concerned with preparation for marriage and presents the subjects: how can you tell if it is love; the wise choice of a mate; courtship and engagement; premarital sex relationships; premarital physical examination; and marriage counseling.

Part Two is devoted to certain problems of marriage, including sex anatomy and physiology; technic of marriage relations; emotional adjustment in marriage; predictions of marital adjustment; the wedding, honeymoon and first marital adjustments; home management and finance; extramarital relations; psychologic factors in marital maladjustments; the health and hygiene of marriage; and miscarriages and abortions. The discussion of sex technic leaves much to be desired as it overstresses physical technic and does not adequately recognize psychic factors or the neurotic nature of most persistent disorders of sex function. Certain outworn misconceptions are repeated, such as "orgasm is orgasm, however won" (denying the significance of pathologic infantile patterns); the old bogey concerning alleged exhausting and debilitating effects of "sexual excess"; and disparity in the size of sex organs as a significant factor in maladjustment. These defects in Part Two are partially overcome in the excellent discussion of emotional adjustment by another of the authors.

Part Three takes up planning a baby; heredity; fertility; pregnancy; childbirth; and the control of conception.

Part Four deals with problems of children and goes into physical growth of the child; child psychology; adoption; remarriage and the stepchild; masturbation; sex education; juvenile delinquency; adolescent preparation for marriage; and parent-child relationships. The material on sex education of children is weak, a characteristic shared with nearly all of the professional literature in this field.

In Part Five there is a discussion of miscellaneous social problems of sex and marriage. The chief topics considered are sex and the social order; prostitution; venereal diseases; divorce; the menopause and associated factors; how women adjust to marriage; and education for family living. The discussion of the menopause does not adequately take into account psychiatric insights into menopausal symptoms.

The book has 16 excellent illustrations, most of them by the well-known artist-gynecologist, Dr. Robert L. Dickinson. A good index is provided.

This work presents an interesting and significant collection of articles most of which seem to the reviewer extremely sound, while a few are behind the times, primarily through failure to display an awareness of modern psychiatric insights. Like any symposium, the book has defects in consistency of viewpoint and contains some duplication. But all things considered, it is felt to be one of the most worthy and significant books on sex and marriage ever to appear. Any physician who advises on marriage problems will be satisfied that purchase of the book has been a profitable investment.

Walter Stokes, M.D.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have been received for review:

War, Politics, and Insanity. C. S. Bluemel, M.A., M.D., F.A.C.P., M.R.C.S. (Eng.) Price, $2.00. Pp. 121. Denver, Colo.: World Press, Inc., 1948.

Treatment of Heart Disease. William A. Brams, M.S., M.D., Ph.D., Associate Professor of Medicine, Northwestern University Medical School, and Attending Physician, Michael Reese Hospital, Chicago. Price, $3.50. Pp. 195, with 11 figures. Philadelphia: Saunders, 1948.

Neuroanatomy, 2nd ed. Fred A. Mettler, A.M., M.D., Ph.D., Associate Professor of Anatomy, College of Physicians and Surgeons, Columbia University, New York. Price, $10.00. Pp. 536, with 357 illustrations, including 33 in color. St. Louis: Mosby, 1948.

The Driving Forces of Human Nature and Their Adjustment. An Introduction to the Psychology and Psychopathology of Emotional Behavior and Volitional Control. Don Thomas Verner Moore, Ph.D., M.D., Monk of the Order of St. Benedict. Price, $6.50. Pp. 461. New York: Grune & Stratton, 1948.

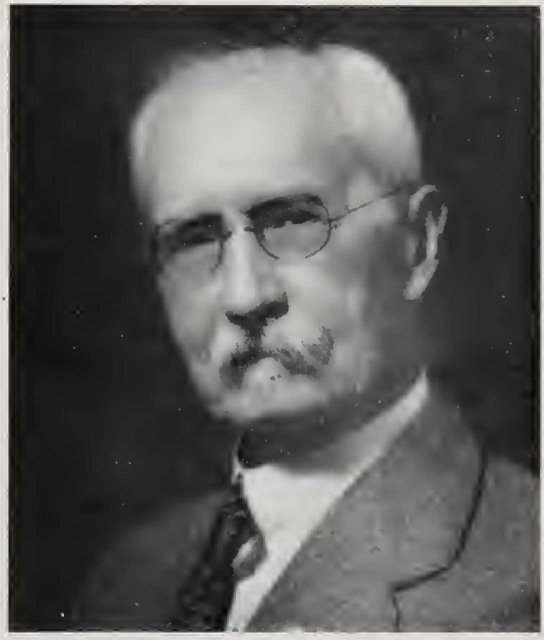
Clinical Diagnosis by Laboratory Methods—A Working Manual of Clinical Pathology, 11th ed. James Campbell Todd, Ph.B., M.D., Late Professor of Clinical Pathology, University of Colorado School of Medicine; Arthur Hawley Sanford, A.M., M D., Professor of Clinical Pathology, Mayo Foundation, University of Minnesota; Senior Consultant, Division of Clinical Laboratories, The Mayo Clinic; with the collaboration of George Giles Stilwell, A.B., M.D., Division of Clinical Laboratories, The Mayo Clinic. Price, $7.50. Pp. 954, with 397 figures. Philadelphia: Saunders, 1948.

A History of the Heart and the Circulation. Frederick A. Willius, M.D., M.S. in Med., Senior Consultant in Cardiology, Mayo Clinic; Professor of Medicine, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, and Thomas J. Dry, M.A., M.B., Ch.B., M.S. in Med., Consultant, Section on Cardiology, Mayo Clinic; Associate Professor of Medicine, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota. Price, $8.00. Pp. 456, illustrated. Philadelphia: Saunders, 1948.

GEORGE TULLY VAUGHAN, M.D., LL.D., F.A.C.S.

(1859–1948)

Dr. George Tully Vaughan, distinguished Washington surgeon, associated with Georgetown University Hospital since its founding, died April 26, 1948, in Georgetown Hospital, where he had been a patient since he fractured his hip in a fall in his home a year and a half ago. He was among the first group of patients moved into the new hospital last July.



GEORGE TULLY VAUGHAN, M.D.

Dr. Vaughan was for 36 years Professor of Surgery at Georgetown University School of Medicine and Head of the Department of Surgery at the University Hospital. He retired in 1933 to become Professor Emeritus of Surgery of the Medical School and consultant at the Hospital. He performed his last operation in 1943, but continued in active association with the Hospital and Medical School until his accident. During his long medical career he had served as Chief Surgeon of Emergency, Providence, St. Elizabeths and Mt. Alto Hospitals.

Born in Arrington, Nelson County, Virginia, June 27, 1859, Dr. Vaughan was the son of Dr.

James Walter Washington Lafayette and Frances Shields Vaughan. He was educated in private schools in Virginia and graduated in medicine from both the University of Virginia, in 1879, and Bellevue Hospital Medical College, New York, in 1880. Postgraduate study was pursued at the New York Polyclinic Hospital, the University of Berlin, and Jefferson Medical College. In 1919 Georgetown University conferred upon him the honorary degree of Doctor of Laws.

In 1888 he joined the United States Public Health Service and Marine Hospital Service as an Assistant Surgeon. He was loaned to the Army in the Spanish-American War and served as Major and Brigade Surgeon with the Seventh Army Corps at Jacksonville, Florida. He remained with the USPHS until 1906, when he resigned as Assistant Surgeon General. Meanwhile, in 1897, he was appointed to the Chair of the Principles and Practice of Surgery at Georgetown Medical School, and Chief Surgeon of Georgetown Hospital, which was founded the same year with a capacity of 24 patients.

When the American forces occupied Vera Cruz, Mexico, in 1914, he served with the Navy at that port as operating surgeon. During World War I he gave up his practice and teaching again to serve with the Navy as Chief Surgeon with the rank of Commander. He was stationed aboard the troopship *U. S. S. Leviathan* during the entire War.

During his lifetime Dr. Vaughan was honored by his colleagues on several occasions. On his 70th birthday, in 1929, members of the staffs of Georgetown Medical School and Hospital arranged a reception and testimonial dinner. On January 27, 1931, when he was serving his 38th year as Professor of Surgery, the Georgetown Clinical Society complimented him with a dinner at the Mayflower Hotel. Again, October 16, 1944, the Medical Alumni of Georgetown University gave a special program in his honor and unveiled a portrait of Dr. Vaughan, painted by Bjorn Egeli, which was presented to the Medical School.

Dr. Vaughan was the author of two books, "The Principles and Practice of Surgery," 1903, and a volume of "Papers on Surgery and Other Subjects," 1932. The latter volume lists some 130 articles but did not include all of his contributions to medical and surgical literature.

Dr. Vaughan was a founder and Fellow of the American College of Surgeons; a diplomate of the American Board of Surgery; a Fellow of the American Medical Association; a Life member of the Medical Society of the District of Columbia since 1947, having served as Vice President in 1909; Past President of the Association of Military Surgeons of the United States; and Past President of the Washington Surgical Society. He was also a member of a great many other scientific, military and social organizations, among which were the Medical Society of Virginia, the Southern Medical Association, the Southern Surgical Association, the American Surgical Association, the International Surgical Association, the Naval and Military Order of the Spanish-American War, the Military Order of World War I, Sons of the American Revolution, Society of the Cincinnati of Virginia, the Washington Academy of Sciences, and the Cosmos Club.

Surviving are a son, Brigadier General William W. Vaughan, U.S.A. (retired), of Bridgehampton, Long Island; a daughter, Mrs. Vera Vaughan Crute, with whom Dr. Vaughan made his home at 1718 Eye Street, N. W.; two sisters, Mrs. Franklin Burks of Amherst, Va., and Mrs. J. Edward Hoffman, of Washington. His wife, Mrs. May T. Venable Vaughan, died in 1931.

RICHARD LLOYD COOK, M.D.

(1878–1948)

Dr. Richard Lloyd Cook, who retired two years ago from Veterans Administration because of ill health, died April 26, 1948, at his home, 3211 Rittenhouse Street, N.W.

Dr. Cook was a native Washingtonian, born November 5, 1878, the son of the late Dr. George Wythe and Rebecca Lloyd Cook. He graduated from the University of Virginia Department of Medicine, Charlottesville, in 1904.

As Lieutenant Colonel in World War I, Dr. Cook was commander of a base hospital in France. After the War he joined the U. S. Public Health Service and later the Veterans Administration. He was in charge of various veterans' hospitals throughout the Nation and was head of the hospital at Outwood, Kentucky, before being transferred to Washington shortly before he retired two years ago. At that time he was a member of the Disability Rating Board.

Dr. Cook was elected to membership in both the Medical Association and the Medical Society of the District of Columbia in 1907, and transferred to Associate membership in 1918, which membership he retained until his death.

Surviving besides his wife, Mrs. Catherine Cook, are three children, Richard Cook, of New York, Mrs. Richard Millard, Columbus, Ga., and Miss Corliss Cook, a student at the University of Maryland.

PHILIP WEATHERLY HUNTINGTON, M.D., F.A.C.S.

(1876–1948)

Colonel Philip W. Huntington, retired Army medical officer and former Director of the Army Medical School, died unexpectedly, May 12, 1948, in Bradenton, Florida, where he had gone to buy a home. Colonel Huntington had been Professor of Military Science and Tactics at George Washington University from 1940 to 1943.

Dr. Huntington was born in Norwich, Connecticut, January 20, 1876, the son of Joseph L. W. and Isabelle Fitch Huntington. He came to Washington in 1892 and graduated from Western High School. In 1898 he received his medical degree from Columbian University, now George Washington University.

Beginning his Army career as First Lieutenant in the Medical Corps in 1902, he graduated from the Army Medical School the following year. During World War I he was a surgeon with the 79th Division. In 1916 and 1917, he was Professor of Roentgenology at the Army Medical School, and from 1932 until 1935, Director of the School. In 1928 he was given the permanent rank of Colonel. After serving a total of 42 years in the Army, 12 of which were spent in the Philippines, he finished his career as post surgeon at Fort Bragg, North Carolina, in 1945. Among his decorations were the Silver Star, Purple Heart and Croix de Guerre.

He was a Fellow of the American College of Surgeons and the American Medical Association; a member of the Montgomery County (Maryland) Medical Society; and an Associate member of the District Medical Society from 1942 until he resigned last year. He was a Past Master of the Warwick Masonic Lodge, Virginia.

Survivors are his wife, Mrs. Alice Baldwin Huntington; a daughter, Mrs. Charles Woodruff, Fort Benning, Ga.; two brothers, Dr. William H. Huntington, Portland, Me., and Perit Huntington, Minneapolis; and a sister, Mrs. G. W. Powell, West Hartford, Conn.

Treatment of Mycotic Vaginitis—Dill and Martin

(*Continued from page 390*)

Sensitivity to the drug occurred once in approximately 25 patients and was manifested by a moderately severe chemical vaginitis.

SUMMARY

Twenty-five patients, 15 of whom were pregnant, were treated for vulvovaginitis due to *Candida albicans* with an acridine dye, 9-aminoacridine (1:500), allantoin 2 per cent, sulfanilamide 15 per cent, and lactose 5 per cent in a greaseless base buffered to a pH 4.5 with lactic acid.

Symptomatic cure was effected in about 80 per cent and mycologic cure in about 50 per cent of the patients.

The authors wish to thank Drs. J. W. Pearson, B. W. Richwine, T. M. Leonard, W. T. Lady and J. Paquin for their coöperation in the testing of this material, and Mr. Steven Horoschak of the National Drug Company, Philadelphia, for supplying the specially prepared cream and control materials.

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Nitrogen Mustard Therapy—Eichenlaub and Olivo

(*Continued from page 394*)

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Our Medical Organization-Holden

(*Continued from page 407*)

what the Society has to offer. Then they must take advantage of its services and, certainly of greatest importance, they must show an active interest in the Society. The greatest difficulty encountered by medical organizations is indifference. Paradoxically, the members most indifferent are often the most critical. The effectiveness of the Society does not rest entirely upon the efforts of its officers, but equally upon the contribution of its members in the way of financial and moral support, and, last but not least, by their constructive suggestions.

Speech Clinic

(*Continued from page 412*)

Staff headed by Professor C. W. Pettit includes Mrs. Edith Surrey and Mrs. Lee Bielski. Professor Pettit was trained at the University of Wisconsin, Mrs. Surrey received her preparation at Columbia University, and Mrs. Bielski at the University of Michigan. All three staff members hold a Master's degree in speech pathology.

Prospective students are invited to telephone or write Mr. Pettit in the Speech Department at the University for more complete details concerning their particular problems.

Medical Training Program

(*Continued from page 416*)

to remain in the Navy for a certain obligated time.

If on original appointment a candidate has not been approved for more than one year of training, during his first year of residency training (Program A) he may compete for one of the 300 residencies (Program B) available to the regular Naval medical officers, and if he obtains such training he will obligate himself to remain on active duty for an additional period depending upon the amount of time spent in training.

Program B: Three hundred residencies, fellowships or courses will be reserved for continuing the Training Program as presently organized for regular medical officers.

The obligated service following graduate medical training (courses, fellowships and residencies) in Naval hospitals is one year for each year of training received.

Information concerning any part of the program may be obtained by writing to the Chief of the Bureau of Medicine and Surgery, Navy Department, Washington 25, D. C.

Washington Physicians of Yesterday—Shute

(*Continued from page 408*)

Professor of Anatomy in the Columbian (George Washington) University School of Medicine 1886–1910; he was also Clinical Professor of Ophthalmology in that school. He was author of "A First Book in Organic Evolution," 1899, and of other scientific contributions.

Dr. Shute became a member of the Medical Association of the District of Columbia in 1883, and of the District Medical Society in 1892; of the latter society he was Vice President in 1903, and President in 1907, besides serving on its Executive and other committees. Other medical and scientific societies claimed his membership and services; also the Society of the Cincinnati (hereditary member), the Sons of the American Revolution, and the Cosmos Club. He was memorialized in "Who's Who in America" and "American Men of Science."

He married Augusta Pettigrew, M.D., August 19, 1896. On October 21, 1935, he died suddenly and unexpectedly, on the eve of his 77th birthday, while seemingly in full possession of his faculties and powers.

Scholarly, cultured, and thoroughly scientific, Dr. Shute had a variety of interests; he was conspicuously genial, affable, and popular, and he won the esteem and regard of a host of his students and associates.

John B. Nichols, M.D.

THE CAUSALGIC STATE: PERIPHERAL PATHWAYS FOR PAIN*†

FRANCIS D. THREADGILL, M.D.
Washington

THE origin of pain and the pathways for its conduction remain an ill understood feature of neurophysiology. The causalgic state presents a challenging field in such studies, for causalgia is essentially the presence of severe and unexpected burning pain in extremities following trauma.

The pain usually appears shortly after injury but often comes on after healing of the wound. Much has been written concerning traumatic vasospasm following a wound of an extremity when the member becomes cold and pale from tissue ischemia. The effect of sympathetic block in this type of lesion is often dramatically successful. Pain in such cases is usually a rather minor complaint and must be due to impaired blood supply to peripheral tissue. With progression of such a case into true causalgia, pain assumes a dominant role and is not so often alleviated by sympathetic nerve interruption. The causalgic state may thus be considered[1] in two phases: the early or vasospastic lesion, which is amenable to sympathetic blocking, and the late or fixed lesion when an irreversible pathway for pain may have developed. This lasting and severe burning pain following a minimal wound presents a picture which demands further clarification.

Leriche[2] described operations upon certain soldiers who were given no anesthetic and yet suffered no apparent pain. Many surgeons have been at a loss to explain such phenomena when contrasted with other people who apparently suffered exquisite pain following minimal injuries. Pain thresholds are known to vary according to race, type, sex, and age; yet all men are essentially the same anatomically, and it is a subject of extreme interest and much importance to arrive at a proper explanation and understanding of the variations in pain mechanisms in different people following injury.

In the causalgic state the essential lesion appears to be one of vascular and neural irritation resulting from wounds involving blood vessels or nerves. The persistence of pain in such cases has frequently led to local explorations for the removal of irritating foreign bodies and lysis operations to relieve pressure on nerve or vessel. These are successful in some instances, but there remains a considerable number of cases which are not only not improved by local exploration but are actually made worse.

The lesion at the site of injury serves as the beginning of a complex pathway for painful impulses. After complete healing of such wounds the pathway may continue to bombard higher centers with unpleasant impulses. At this point one must consider (1) the origin of the impulse, (2) its transmission to the cord, and (3) the reception and appreciation of the impulse by higher centers. The origin will be discussed briefly. The reception and appreciation of the painful impulse at the cord level and above is a subject about which there has been much speculation. This phase has been dealt with extensively by Livingston[3] and others. The transmission of the pain from the lesion to the cord will be the major consideration of this paper. It will be shown that this portion of the pain pathway serves to allow a constant

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* From the Department of Anatomy, Georgetown University School of Medicine.

† Read before the Society's Section on Neurology and Psychiatry, January 8, 1948.

stream of sensory impulses to enter the cord both segmentally and extrasegmentally.

Causalgia of the fixed type is here considered an abnormality within the pain pathway. The problem of phantom limb appears to be closely related to causalgia. A phantom is a sensory illusion or a misinterpretation of incoming impulses. It is of interest to note that in many cases painful phantoms will disappear after sympathectomy. Other pain phantoms may not be relieved by such a procedure. The pain in such problems has warranted the removal of considerable amounts of cerebral cortex in several reported cases in order to remove the sensory projection of the amputated extremity.

The origin of the pain impulse is quite obscure and I believe will not be fully explained until more studies on this subject are done along the line of Sir Thomas Lewis' work[4] concerning the nocifensor nerves. Lewis and Kellgren,[5] studying cutaneous hyperalgesia, concluded that the pain nerves of the skin belong to a system separate from those running to deep-lying structures. The differences in the reflexes associated with stimulation of afferent paths from skin and deep structures, they found, lend additional support to this view. Lewis[4] found that distal stimulation of cutaneous nerves results in irritation of "nocifensor" or antidromic impulses which result in hyperalgesic responses in the area of the stimulated nerve distribution.

The nerve fibers involved in the transmission of pain have been studied by Gasser[6] and others. The fibers transmitting sensation are divided into A, B and C types according to their size, myelination, and rate of conduction. The C (unmyelinated) fibers are the last to be blocked out in pressure experiments and are known to carry pain sensation. Such fibers (whether afferent or efferent or both) are known to constitute the majority of fibers found in the sympathetic trunks.

Kuntz and Farnsworth[7] have called attention to fibers in anatomic studies of retrograde degeneration in cats and stated that there were a goodly number of fibers in the sympathetic ganglia associated with the sacral and brachial plexuses which must be regarded as afferent.

Middleton and Bruce[8] believed that afferency in the sympathetic trunks must be present, but did not present other than clinical supporting evidence. Doupe[9] has called attention to certain afferent neurons in peripheral nerves associated with vasomotor reflexes which he states do not reach conscious levels.

The work of Davis and Pollock[10] has shown that complete anesthesia of an extremity may be expected if enough posterior roots are sectioned. Rhizotomy has fallen into disfavor, however, because it has been unsuccessful so frequently. It has been shown by Wolf[11] and others that following sympathectomy an extremity may be rendered more sensative to pain. It has also been shown in a case presented by Slaughter[12] that there may be severe pain in the extremities when there has been transection of the cord.

Concerning the course of these sympathetic fibers in the extremity there is no longer any doubt. Foerster[13] and others at one time believed that the perivascular sympathetics were able to transport impulses for a significant distance and that this was the mechanism explaining pain after posterior root section. Indeed this theory led to the development of periarterial sympathectomy.[14] Moore and Singleton,[15] however, have proven that all sensation of an extremity is abolished when the peripheral nerves are sectioned, and further that after sympathectomy alone the intra-arterial injection of lactic acid is intensely painful.

The relief of pain afforded by sympathectomy has in the past been attributed to the section of vasospastic fibers, yet deTakats[16] has shown that pain is relieved in many causalgic states, by sympathectomy, when vasodilatation is present rather than vasospasm.

A pathway of certain afferent impulses from the completed peripheral nerve to the cord by way of the sympathetic paravertebral structures will explain many of the bizarre findings of others reported in this paper and the effects of sympathectomy in relieving pain when vasospasm is not a factor.

In a previous publication[17] I have shown that pain may be conducted from peripheral nerve to the spinal cord by way of the sympathetic ganglia. These experiments showed that in unilaterally sympathectomized animals, when the posterior roots of the lumbosacral plexus innervating the legs were cut bilaterally, painful sensations were perceived by the animal only in the side where the sympathetic ganglia, trunk and rami were intact. It was, therefore, deduced that painful stimuli were conducted via the grey communicating rami to the sympathetic ganglia, then transported up or down the sympathetic trunk, and reëntered the cord through intact posterior roots at extra segmental levels. Figure 1 graphically explains this concept.

From the foregoing data the following theory of dual afferency has been elaborated: Sensation in the extremities consists of an afferent nerve supply from both the somatic and visceral nerves from a given part. Of these components the somatic nervous supply, with cell body in the dorsal spinal ganglia, is well understood. The sympathetic (or visceral) afferent supply passes from nerve endings within the visceral organs of the extremity (e.g., blood vessel, sweat gland) by way of a peripheral nerve to the grey rami communicans, where it enters the sympathetic ganglia and trunk. These fibers then pass to the cord at their own segment and to extra segmental levels so that reflex sympathetic arcs producing the typical mass response of the sympathetic system may be obtained. In this concept blood vessels and the pilosebaceous apparatus are under control of separate and local autonomic centers for reflex action within the spinal cord. This would seem to be an orderly concept for the regulation of vascular tone, and obviates the necessity to consider that sympathetic efferents consist of separate and distinct vasoconstrictor and vasodilator fibers. Furthermore, this pathway accounts for the diffuse inflow of protopathic sensation (phenomenon of overlap), since deep pressure and similar impulses may originate from stimuli of visceral structures whereas epicritic sensation is sharply conceived by specific receptors and sharply conducted by localized fibers passing through segmental posterior roots alone. Figure 2 serves to illustrate this theory.

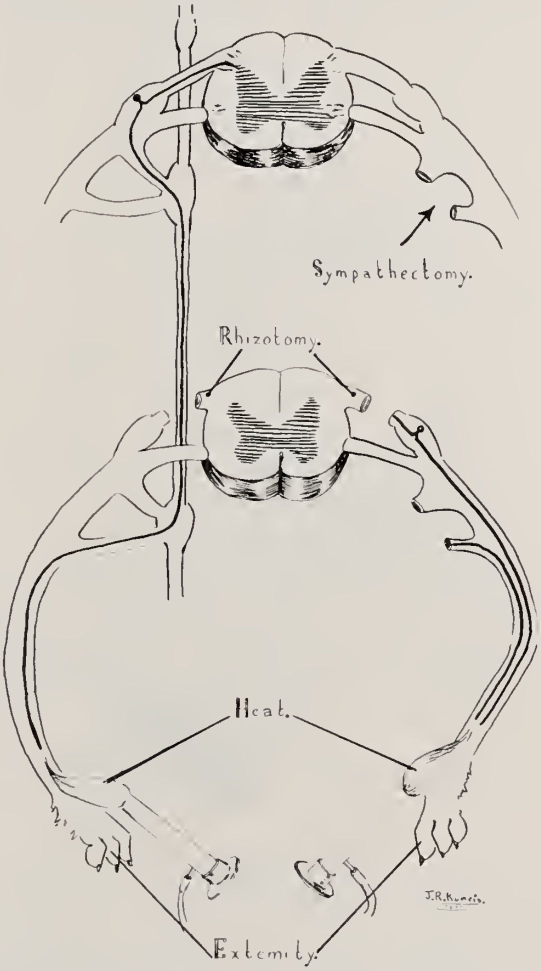

FIG. 1. Extra segmental orifice of afferent sensation. (Redrawn from "Afferent Conduction via the Sympathetic Ganglia Innervating the Extremities," Surgery, 1947, 21, 569.)

This theory, accordingly, introduces a new functional component in the makeup of the spinal nerve in the segments of the cord innervating the extremities. This component parallels the known viscerosensory fibers coursing in the splanchnic nerves of the thoracolumbar region in providing a pathway for smooth muscle structures of the extremities to secure reflex action "en masse" as is seen clinically. There is no violation of fundamental anatomic or physiologic principle in this theory, since there is now both anatomic and physiologic evidence for afferency within the sympathetic trunks in the region of the lumbosacral plexuses. The location of the cell body of these visceral afferent fibers properly belongs in the dorsal spinal ganglia. At present, however, we are attempting to prove this and to determine the extent of this pathway within the sympathetic trunks.

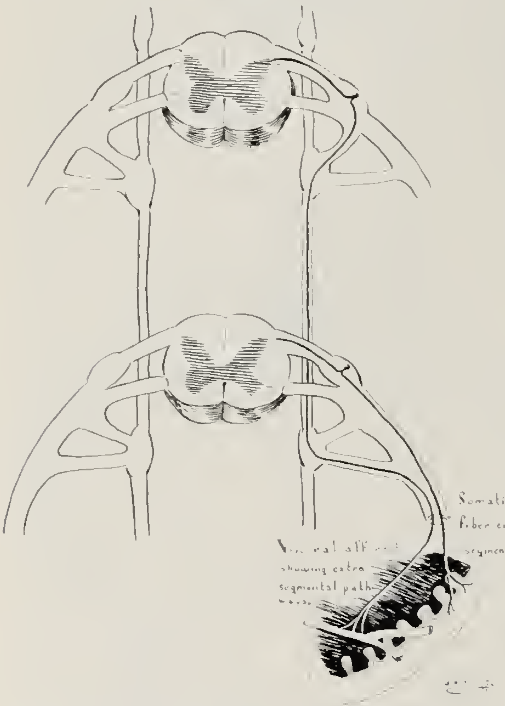
Somatic afferent fiber entering cord segmentally.
Visceral afferent showing extra segmental pathways.

FIG. 2. Two routes for afferent sensation from an extremity to explain the theory of dual afferency in pain.

Pain in causalgia can be considered as following a mechanism which ordinarily serves as a subconscious pathway for reflex innervation of the visceral organs of the extremities. In the causalgic state, however, pain arises in blood vessels and other visceral organs and is transported to the cord via this pathway. There is no question that there is disturbance of these visceral organs because some manifestation of sympathetic or "trophic" damage is seen in every case, such as bone absorption, vessel changes, or changes in the hair of the part. These lesions in turn then produce afferent painful impulses which are abolished by sympathectomy, which breaks a vicious cycle and frequently affords relief. When relief is not secured it is probable that structures provided with epicritic sensation are damaged and sympathectomy therefore does not affect the pathway.

CONCLUSION

1. By inference from experimental studies on the peripheral pathways for pain, it is believed that in the causalgic state a considerable amount of appreciable painful sensations are transported from peripheral nerve to the cord by means of afferent nerve fibers in the sympathetic ganglia.

2. Visceral afferent fibers coursing through the sympathetic paravertebral structures provide a pathway for protopathic sensations to enter the spinal cord via extra segmental levels.

3. To explain the mechanism of causalgia, it is proposed that general visceral afferency is a functional component of the spinal nerve and that this pathway reaches conscious levels under certain conditions.

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(*Continued on page 479*)

EXAMINATION AND DIAGNOSIS OF MAMMARY TUMORS

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Professor of Pathology, Georgetown University School of Medicine

PHILIP BURKA, M.D.
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RECENT publications in newspapers and magazines are bringing more and more patients to their physicians for the diagnosis of real, questionable, and imagined breast tumors. Since carcinoma of the breast is one of the most frequent malignant neoplasms in females, and since it carries such a high mortality rate, it is imperative that the diagnosis be made early and with certainty. The problem often is not whether a tumor is malignant, but whether a biopsy is indicated.

Because most patients consult the internist or general practitioner first, it is important that he should be familiar with correct procedures of examination, as well as impressed with the importance of a proper diagnosis. Statistics show that early carcinomatous lesions carry a cure rate of 45 per cent, or higher, whereas those further advanced show a 5-year survival of only 15 per cent or less.

HISTORY[1]

The importance of taking a proper history cannot be overemphasized. The patient should be carefully questioned concerning those factors relative to her breast and its physiologic development as well as specific factors bearing upon the mammary complaint. The following data should be included:

1. The presence of mammary cancer in other members of the family.
2. The character of breast development during adolescence.
3. The number of pregnancies and lactations.
4. The character and complications of lactation and the presence or absence of lactation mastitis.
5. The menstrual history: the character of the periods, the onset of the menarche, and the menopause.
6. A record of pelvic operations.
7. The presence or absence of thyroid disturbances.
8. The weight of the patient, including previous maximum and minimum in adult life.
9. Any previous trauma to the breasts.
10. A history of previous mammary operations.
11. The presence and degree of premenstrual pain and swelling in the mammary gland.
12. The presence and character of discharge from the nipple.

INSPECTION

Before examination it is best that the examiner not know which breast or which part is involved. Examination of both breasts will be more thorough if the examiner is uninformed as to the site of the trouble.

Inspection should be carried out with the patient stripped to the waist and sitting in an erect position. The skin, nipples, and areolae, the breasts, the axillae, and the neck should all be carefully scanned. The skin in the submammary folds should not be neglected. The arms should be slowly raised and lowered. This demonstrates any early skin attachment or early fixation of the nipple. The presence or absence of supernumerary nipples or accessory mammary tissue should be noted. The skin should be examined for discoloration, dimpling, ulceration, edema, and fixation, as well as for epidermal and subepidermal nodules.

The nipples and areolae should be carefully inspected as to size and pigmentation. Attention should be given to the presence of inversion or retraction of the nipples, whether congenital, intermittent, or recent. The excursion of the nipples when the arms are raised and lowered, and the distance of both nipples from the suprasternal notch in the midline should be measured. The nipples should be carefully examined for scales, warts, or fissures.

Symmetry and comparative sizes of the two breasts should be noted, as well as any visible sinuses, masses, etc. The character of the breast development should be recorded.

TRANSILLUMINATION[2]

All breasts with questionable tumors should be routinely transilluminated in a completely dark room or closet, with a strong, cool light. The light should emanate from a single surface or focus, so that it can be moved to various areas of the breast. In examining smaller lesions of the breast, a light of decreased intensity should be used.

An ordinary flashlight is satisfactory, or a long thin light, similar to that used to transilluminate sinuses, could be used. An opal transilluminator on a long cord has proved most useful for examining small breasts.

The light should be directed from beneath the breast upward. Fatty tissue transilluminates well, the glandular tissue being more opaque. Cysts filled with clear or cloudy fluid also transilluminate, as do most solid tumors less than 2 cm. in size. Vessels and cysts filled with blood, hematomas, and dilated ducts distended with inspissated secretion cast shadows. Most carcinomas cast a shadow on transillumination if of 2 or more centimeters in diameter. Some papillary or duct cancers which are too soft or deep-seated to be palpated as definite tumors cast a distinct shadow. On the other hand, an occasional large scirrhous carcinoma between 4 and 5 cm. will transilluminate. Lesions in the upper half of the breast, and those which are fixed to the chest wall, as well as small, flat, nonpendulous breasts, are unsuitable for transillumination.

PALPATION

All the mammary tissue, as well as the axillary and supraclavicular regions should be palpated, using the fingers, or the palm, with the fingers extended. The mammary tissue is gently compressed between the palpating hand and the chest wall, with the patient lying flat on her back, her hands resting on top of her head. It is convenient to chart the size and locations of any nodules in the quadrants of a circle, using a tangent to indicate the axillary fold, so that palpable nodes may also be noted. Only extensive experience in palpation teaches the characteristics peculiar to mammary lesions. The clinical impression on palpation must be repeatedly correlated with the gross and microscopic findings.

A methodical procedure is advocated in examining all breasts, with the following points in mind. The size of the tumor should be given in centimeters, the contour described as smooth, rough, rounded, lobulated, or irregular, and note made as to whether the mass is encapsulated, circumscribed, or its margins ill-defined. Consistency is important and described as fluctuant, soft, resilient, firm, or hard. Mobility and fixation should be noted, as well as the rate of growth. The latter may be best determined by questioning the patient in regard to its duration and the size when first noted.

ROENTGENOGRAPHY

The accessibility of the breast to inspection, palpation, and transillumination reduces the value of X-ray examination, in comparison to that of most internal organs. Lockwood[3, 4] described the X-ray appearance of a variety of mammary conditions by using special soft-tissue technic. This is particularly useful for lesions in the upper half of the breast, where transillumination is difficult. It is not a substitute for exploratory operation.

Hicken[5] and others have advocated more complicated procedures by filling the larger ducts of the breasts by way of the nipple with injections of a contrast medium in order to study the duct tree. The injection of air to bring out tumors in the periductal regions is also advocated. It is not felt that complicated X-ray procedures are justified from a clinical standpoint, because in any event biopsies must be performed in all doubtful cases.

It is far more important, in cases of suspected malignancy in which radical operation is contemplated, to study the chest and skeleton for possible metastases. This is especially important, since the presence of metastases contraindicates the radical operation. The two most valuable films are those of the chest, including the upper humeri, and of the pelvis, including the lumbar spine and upper femurs.

INFRARED PHOTOGRAPHY

The study of the pattern of the superficial mammary veins has been recently advocated by Massopust.[6] Its reliability as a diagnostic procedure has not been established but is probably less than transillumination. Palpation and biopsy are still the outstanding diagnostic procedures.

BIOPSY[7]

Aspiration biopsy has a definite place in the diagnosis of mammary lesions. For aspirating a benign cyst anesthesia is not necessary. The skin should be clean and sterilized, and the cavity of the cyst easily reached with a sterile 22-gauge needle and a lock-barrel syringe. Aspirated fluid should be examined microscopically as well as grossly. Simple cysts usually contain clear to cloudy fluid with desquamated epithelium. A smear crowded with white blood cells is obtained from an abscess cavity, whereas red blood cells predominate when an intracystic papilloma has been aspirated.

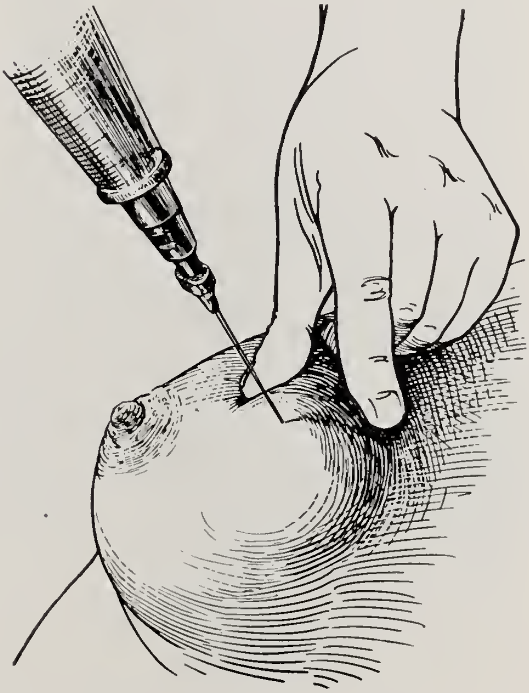

FIG. 1. Aspiration of a breast cyst or tumor. If a cyst, constant traction is placed on the barrel of the syringe after penetrating the cyst wall at right angles. If the tumor is solid, the needle should be withdrawn partially and pushed forward again at a different angle, traction being asserted all the while.

When tissue is to be withdrawn for microscopic diagnosis the skin should be anesthetized and incised to prevent carrying epidermis to the biopsy needle (fig. 1). An 18-gauge needle is used and is inserted at right angles to the surface of the tumor, while suction is being exerted on the syringe. When the tumor has been penetrated for a short distance, the needle is partially withdrawn and pushed forward again at a different angle. The needle is then slowly withdrawn, and the aspirated tissue expelled from the needle and placed between two slides. These are pressed together and then pulled apart horizontally so that the tissue is spread out in a thin film. This should then be fixed, stained, and examined.[8]

Aspiration biopsy is suited to fairly large, clinically malignant tumors for which irradiation rather than surgery is a treatment of choice. There is, however, a large number of mammary tumors the accurate diagnosis of which must be obtained by surgical biopsy. Tumors less than 3.5 cm. in diameter should be excised with a margin of normal tissue. Sharp dissection is recommended, with as little handling of the tumor as possible. A piece of this should be removed for immediate frozen section. If the pathologist's report is cancer and the wound has not already been closed, the wound should be packed with a sponge soaked in 50 per cent zinc chloride solution or 10 per cent formalin solution, gloves and instruments should be changed, and the complete operation carried out. In the larger tumors mentioned before, in which aspiration biopsy is equivocal, the tumor may be incised and a piece removed with an electrosurgical biopsy unit, so that a frozen section may be made.[9]

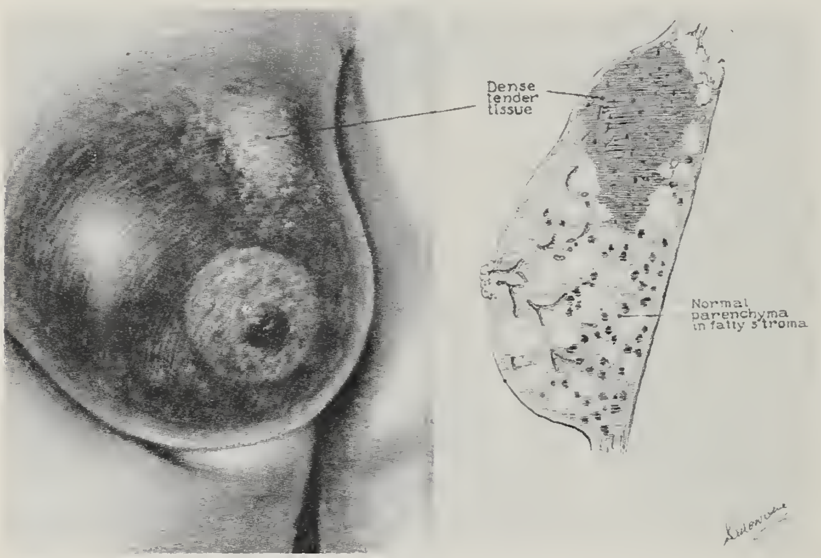

FIG. 2. Findings of mastodynia on palpation. The affected areas consist of dense, elevated, granular tissue. This is tender and has ill-defined margins.

VARIETIES OF BREAST TUMORS[1]

A palpable mass in the breast, with or without associated tenderness, presents the possibility of three major conditions:

1. Cystic mastitis, or mammary dysplasia.
2. A benign tumor, either fibro-adenoma or intraductal papilloma.
3. Mammary carcinoma.

A serous or milky discharge from the nipple occurs in 3 per cent of normal women and is of no diagnostic significance. On the other hand, a sanguinous discharge suggests a benign intraductal papilloma, since it occurs in about 50 per cent of such cases. A similar discharge is found in about 4 per cent of the cases of mammary carcinoma, and, although it rarely precedes the discovery of the lump, the cause of mammary bleeding should always be investigated.

Fibro-adenoma is the most common benign tumor and usually occurs during or following adolescence between the ages of 15 and 29 years. Intracystic papilloma occurs at or near the menopause. Cystic mastitis affects women with few or no children in the mid- and late-child-bearing period, whereas cancer is most prevalent during and following the menopause. Infection of the breast is rarely seen except during lactation. Pregnancy favors the disappearance of cystic mastitis but leads to a more rapid growth of a previously existing fibro-adenoma or carcinoma.

Cystic mastitis or mammary dysplasia.[10] This consists of many forms and bears many names, the most common of which are fibrocystic disease, mammary dysplasia, mastodynia, adenosis, and cystic disease, the latter being cysts resulting from secretory changes. These are the most common breast changes in women during sexual maturity, and the predisposing factor is postponement or absence of normal functions of pregnancy and lactation. The mildest form of cystic mastitis or mastodynia consists of dense, elevated, granular tissue (fig. 2). This is more tender and swollen in the premenstruum. Pathologically, the tissue is composed of stunted mammary lobules, surrounded by increased amounts of periductal connective tissue. Sometimes this reaches the form of adenosis. This is a proliferative form of the disease and contains multiple small, shot-like nodules, varying from a millimeter to a centimeter in size and palpable in both breasts. These nodules are composed of proliferating glandular tissues, which may form minute papillomas or adenomas, or undergo cystic dilatation (fig. 3). There may be in addition dense, tender tissue, such as is found in mastodynia. The breasts in adenosis have a definite saucer-like edge, which slips between the fingers, and both glands are usually smaller and firmer than normal.

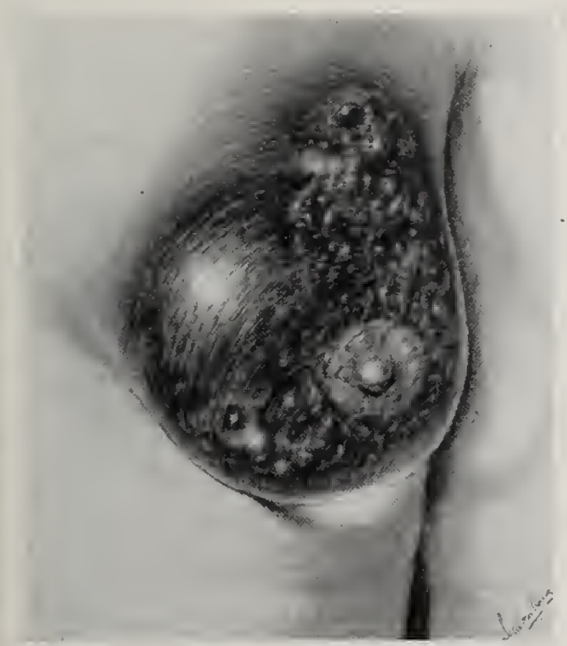

FIG. 3. Characteristics on palpation in adenosis. The breast contains multiple, small, shot-like nodules, and has a definite edge when grasped between the fingers. These vary from a millimeter to a centimeter in size and are palpable in both breasts.

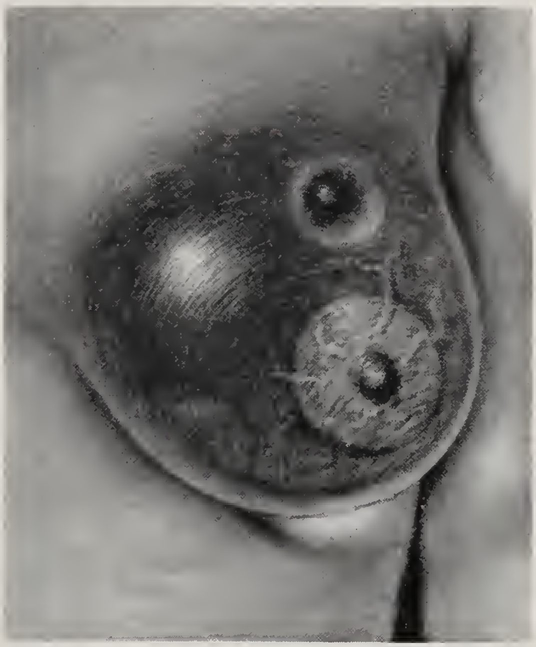

FIG. 4. Characteristics on palpation of a solitary cyst. If over 2 to 3 cm. in diameter it is palpated as round, dense or fluctuant. The mass slips readily from side to side beneath the finger, there is no attachment to the surrounding tissue, and the mass may be ballotable.

In cystic disease the breasts are usually adipose. A solitary cyst of appreciable size, 2 to 3 cm. in diameter, is palpated as round, dense, or fluctuant, and slips readily from side to side beneath the pressure of the examining finger. Usually, the dome is round, the mass may be ballotable, and there is no attachment to the surrounding tissue (fig. 4).

Significant menstrual disturbances are the rule in cases of chronic cystic mastitis. In women with mastodynia the cycle is apt to be short, 22 to 26 days, and this is particularly true of the periods immediately preceding the development of the dense, tender tissue. In patients with adenosis the cycles are more irregular, and periods of from 30 to 40 days are interspersed with those of 24 to 26 days. In women with cystic disease the effects of the menopause are usually apparent, and one or more cycles may have been missed.

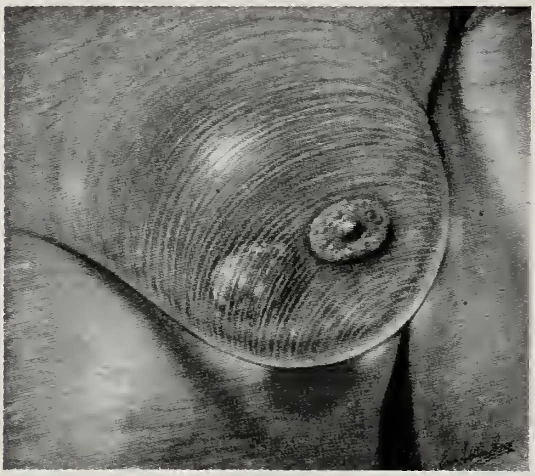

Fig. 5. Characteristics of a fibro-adenoma on palpation. The lesion is firm, circumscribed, lobulated and freely movable.

It is interesting to note that in a series of 800 cases of mammary dysplasia followed for an average of over 10 years the incidence of cancer was 1.26 per cent instead of the normal expectancy of 0.42 per cent.[11]

Benign tumors. Only two forms of benign neoplasma are found with any degree of frequency in the breasts. These are fibro-adenomas, with a structure of fibrous tissue and ducts, and papillomas, composed of epithelial tufts growing within the dilated duct or cystic cavity. Fibro-adenomas occur with 3 times the frequency of papillomas.

Fibro-adenoma is the most common benign tumor of the breast in young women during the child-bearing period. The lesion is firm, encapsulated, and freely mobile (fig. 5). There is usually a history of gradual enlargement over a period of months or years. In early adolescence, in pregnancy, or toward the menopause, however, more rapid growth may occur. These are times when the high concentration of the ovarian hormone, estrogen, is a possible stimulus to the growth. The breast containing the fibro-adenoma is usually well developed, firm, and of the virginal type. If the patient is adolescent, or under the age of 25, the diagnosis of a benign lesion is relatively certain, if the characteristic encapsulated, dense, lobular structure is felt. In older patients the circumscribed forms of mammary adenocarcinoma may simulate such a lesion.

Intracystic papillomas. These are soft epithelial growths projecting into a cystic cavity. In 50 per cent of the cases a tumor is associated with a bloody discharge from the nipple (fig. 6). The lesion is often found near the nipple and usually casts a dark shadow on transillumination because of the blood contained in the cystic portion. In contrast to fibro-adenomas, most papillomas occur after the age of 30. The size of fibro-adenomas is dependent upon their fibrous component. Therefore, they may exceed 5 or 10 cm. in diameter and still maintain their benign character. Papillomas of corresponding size are prone to malignant changes unless they are within a cavity distended by encapsulated fluid. In a series of 200 benign intracystic

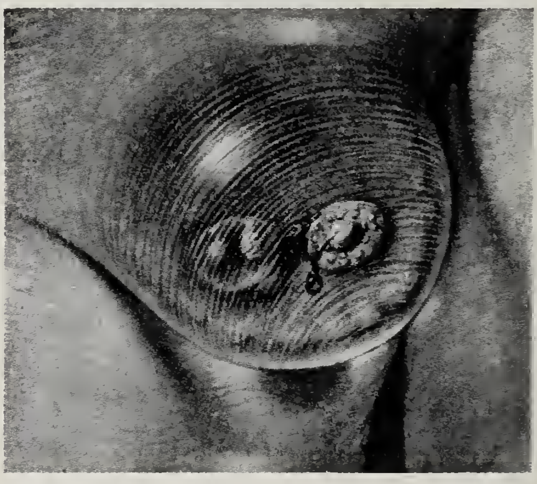

Fig. 6. Characteristics on palpation of a benign intracystic papilloma. The tumor is soft, circumscribed and freely movable. It is usually located near the nipple. Hemorrhagic fluid is often expressed from the nipple during palpation.

papillomas the percentage of malignant change when followed for more than 5 years was 9. Excision permits pathologic confirmation of the benign character of the growth and suffices to cure the solitary lesion.

Mammary carcinoma. Only the early stages of mammary carcinoma will be discussed here. The importance of early diagnosis is reëmphasized when one realizes that, once the disease becomes manifest, the average duration of life is only 4 years. Thirty to 40 per cent of all forms of breast cancer subjected to radical mastectomy, with or without postoperative irradiation, survive the 5-year period. Approximately one third of these surviving patients, however, die of carcinoma before the end of 10 years. A recent publication from the Massachusetts General Hospital gives a 5- to 8-year survival rate of 75.5 per cent of patients without axillary lymph node involvement, whereas only 33.3 per cent of those with axillary metastases survived. The survival rate for the entire group submitted to radical operation was 50.5 per cent.[12]

The majority of patients with cancer of the breast are between 40 and 50 years old and have a painless lump in the breast of 2 to 3 cm. in diameter. This has been present 6 to 8 months. Persistence of the lump, its increasing size, occasional fleeting pain, tenderness, changes in the nipple, or a chance conversation are the chief reasons to seek advice.

The malignant mammary tumor is usually a solitary lump and is rarely complicated by the presence of other nodules or a history of the excision of a previous tumor. Due to the age group in which carcinoma is usually found, the breast affected is most often undergoing involutional changes, and much of the glandular tissue and fibrous stroma is replaced by fat. The hardness and irregular surface of the tumor have been frequently emphasized. Tumors 2 cm. or more in diameter cast a shadow on transillumination, if the light employed is not too intense. This is because of the solid nature of the tumor. The restricted mobility of the tumor and the presence of ill-defined margins are impressions frequently gained on palpation.

The 5 major findings of the breast (fig. 7) are:

1. The presence of a single lump in a breast otherwise normal to palpation.
2. The hard and irregular feeling of the tumor.
3. The apparent nearness of the tumor to the examining fingers because of atrophy of overlying fat. In these cases, the tumor seems to "jump" to the examining fingers.
4. The restricted mobility of the mass.
5. Flattening or retraction of the skin or nipple on the affected side, when the arms or breasts are manipulated.

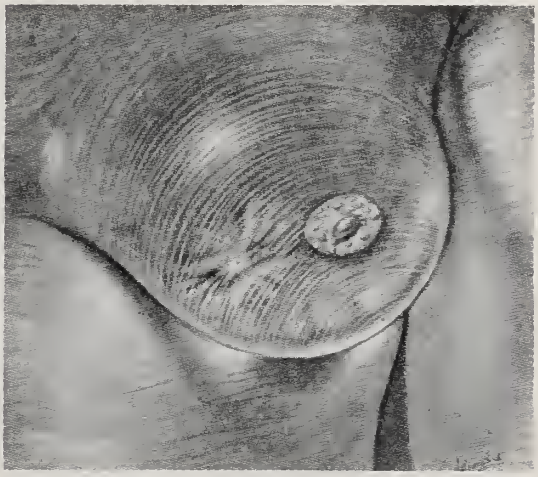

FIG. 7. Findings on palpation of infiltrating mammary carcinoma. The tumor is hard, irregular, attached to the surrounding tissue with restricted mobility, and has a feeling of superficiality due to atrophy of the overlying fat.

Ninety per cent of malignant tumors of the breast are adenocarcinoma, and four fifths of these are of the infiltrating variety, commonly called scirrhous carcinoma. These infiltrating adenocarcinomas have a stellate appearance in the gross and cut like an unripe pear, leaving a cellular, firm, glistening surface, which retracts rather than bulges. Under the microscope, the more malignant tumors grow in cords or small islands of spheroidal cells, which are imbedded in abundant amounts of reactive fibrous tissue. The prognosis of these tumors is

TO DIFFERENTIATE DISEASES OF THE FEMALE BREAST

Which include: Lactation Mastitis, Mastodynia, Adenosis, Cystic Mastitis, Mammary Carcinoma, Mammary Fibro-adenoma, and Intracystic Papilloma

ESTABLISH THE PRESENCE OF:	IF ASSOCIATED WITH:	CONFIRM BY:	DIAGNOSIS:
Masses or tenderness. Swollen, caked zone of redness and tenderness.	Fever, chills or sweats. Inflamed or abnormal mucous membranes. Soreness or cracked nipples. Primipara.	Recent delivery, nursing 1 to 4 months.	Lactation mastitis
Masses or tenderness. Pain and tenderness, worse at premenstruum.	Indurated tissue in nonpregnant women in childbearing period. (Patient may have history of sterility.)	Absence of definite nodule.	Mastodynia
Masses or tenderness. Multiple pea or shot-like nodules usually in both breasts.	Breasts often small and edged like a saucer. Women approaching menopause nervous or high-strung, and underweight. History of irregular periods.	Biopsy	Adenosis
Masses or tenderness. Round, movable mass, not tender.	Slight fluctuation. Clearness on transillumination. (Patient at or near menopause.)	Aspiration of cloudy fluid or hiposy.	Cystic mastitis
Masses or tenderness. Fixed, hard or irregular mass.	Discharge of blood or pus. Bleeding from the nipple not uncommon. Apparent nearness of nodule to skin with atrophy of fat. Dimpling of adherence of overlying skin. Age, past middle life. (May transilluminate darkly.)	Biopsy	Mammary carcinoma
Masses or tenderness. Firm, lobulated, movable mass.	Patient in teens or twenties. Breast of the firm virginal type.	Biposy	Mammary fibro-adenoma
Masses or tenderness. Soft, movable tumor in nipple zone.	Discharge of blood or pus. Sanguinous discharge from nipple in 50% of cases. Shadow on transillumination.	Biopsy	Intracystic papilloma

dependent upon their size, which is roughly proportional to the duration of symptoms. Tumors which are 2 cm. in diameter usually have a duration of symptoms of 6 months, and a 5-year survival rate of 65 per cent. Even at this small size, 50 per cent of the cases show axillary gland involvement.

The remaining forms of adenocarcinoma are of low-grade malignancy. These are soft tumors which may show a papillary or gelatinous structure, or may form plugs of tumor cells within the ducts.[13] These tumors grow slower and have a better prognosis than the infiltrating form. There are rare mammary carcinomas composed of transitional epithelium. In these are included Paget's cancer of the nipple or those which form cystic degenerating growths deep in the breast.[14]

SUMMARY

Methods for examination and diagnosis of breast tumors have been presented. These include the taking of a proper history, thorough

(Continued on page 480)

THE USE OF MESANTOIN IN A GROUP OF HOSPITALIZED PSYCHOTIC EPILEPTIC PATIENTS

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MESANTOIN is a relatively new drug which has been used in the treatment of epilepsy and found to be of value.[1–4] It is 3 methyl 5, 5-phenyl-ethyl-hydantoin and is related to dilantin, which is the sodium salt of diphenylhydantoin. It is supposed to possess certain advantages over dilantin, notably the fact that it can be tolerated in larger doses and thus can be pushed to a higher therapeutic level; that it does not produce gingival hypertrophy, and that it is more palatable. The chief side reactions reported have been rash in a small percentage of cases and a tendency to produce drowsiness, which, however, does not compare with that produced by the barbiturates and is generally controllable by regulating the dosage.

The present study was taken to evaluate the effectiveness of mesantoin† in a small but varied group of hospitalized psychotic epileptics, most of whom were responding poorly to their medication.

A few case reports will be given below, and then the results with the entire group will be summarized.

ILLUSTRATIVE CASES

Case 1.—E. R., a 29-year-old white male, was admitted to the hospital in July 1918. His family history was negative for epilepsy. There was a questionable history of a head injury at the age of 5. He had an eighth grade education and served in the Navy from 1909 to 1918. He became listless, sat around and did not eat, and exhibited auditory hallucinations and numerous delusions. He was therefore hospitalized. His record at first does not mention convulsions until 1921, when there is a statement, "is epileptic," and in 1922 another, "one fit a week." Pneumoencephalogram studies have been negative. An X-ray film of the skull was reported as showing abnormality of the sella turcica, and an electroencephalogram showed a localized area of abnormal discharge (right postfrontal-cortical, slow-wave discharge). The electroencephalographic diagnosis was cortical damage and epilepsy. Spinal fluid and neurologic examinations were negative. This patient received phenobarbital 1½ grains (0.1 Gm.) and dilantin, 1½ grains (0.1 Gm.), twice daily, but continued to have 2 or 3 convulsions a month. His medication was gradually changed to mesantoin, and he has had no convulsions since. At present he is receiving 9 grains (0.6 Gm.) mesantoin daily.

Case 2.—H. P., a 34-year-old white male, was admitted to the hospital in September 1931. His family history was negative for convulsive disorder. He was accidentally shot in the head at the age of 14 and since then his left arm has been paralyzed and he has had convulsive seizures. His hospitalization was precipitated by his becoming suicidal and violent following a seizure. Since his hospitalization he has been untidy, frequently disturbed, and suicidal. At times it has been necessary to seclude him to a room. X-ray films of the skull showed 2 metallic foreign bodies, fragments of bone, and 2 holes. He was diagnosed as "psychosis with organic brain disease." He received dilantin, 1½ grains (0.1 Gm.), and phenobarbital, 1½ grains (0.1 Gm.), twice daily, and still continued to have 3 or 4 convulsions a month. In May 1947 his medication was gradually changed to mesantoin. Since then he has had 1 convulsion in May, 1 in August, 1 in September, 1 in October, and 1 in November. He has been better behaved, has been out of seclusion more often, and for the past few months has been able to be on a better ward. The ward attendants have commented favorably on the change in his behavior. At present he receives 9 grains (0.6 Gm.) mesantoin daily.

Case 3.—C. L., a 24-year-old colored male, was admitted to the hospital in April 1932. His family history was negative for convulsive disorder. He had epileptic seizures from a very early age (3 or 4). He had very little education, was illiterate, and worked irregularly. He had a history of considerable alcoholism. He was hospitalized when he became confused and threatening and was found to be hallucinated. Since his admission he has been disoriented, hallucinated, assaultive, and disturbed. He frequently has to be secluded to a room. He was diagnosed as "psychosis with convulsive disorder." X-ray films of the skull were negative. He received tridione, 5 grains (0.3 Gm.), 4 times daily and averaged 2 or 3 convulsions a month on this medication. In May his medication was gradually changed to mesantoin. Since then he has averaged 1 convulsion a month. (This patient sometimes refuses medication.) The nurses' notes mention that he has been less disturbed and that his spells of bad behavior last less long. He receives 15 grains (1.0 Gm.) mesantoin daily.

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* Formerly staff psychiatrist at Saint Elizabeths Hospital.

† The mesantoin used in this study was furnished through the courtesy of Sandoz Chemical Works, Inc.

Case 4.—J. S., a 32-year-old colored male, was admitted to the hospital in November 1932. His family history was negative for convulsive disorders. He had a first-year high school education and worked as a tailor. He was hospitalized when he complained of headache, acted peculiarly, and became wild and incoherent. Blood and spinal-fluid examinations were positive, and a diagnosis of general paresis was made. He received a course of chemotherapy and malaria. Convulsions began a few years after his admission. In the hospital he has been resistive and uncoöperative and has frequently refused medication. He received dilantin and phenobarbital and had an average of 5 or 6 convulsions a month on this medication. In May his medication was gradually changed to mesantoin, but he continued to have 4 or 5 convulsions a month. In October phenobarbital was added to the mesantoin, and he has had no convulsions since. The nurses' notes indicate that his convulsions have been fewer and milder. He receives 9 grains (0.6 Gm.) mesantoin and 3 grains (0.2 Gm.) phenobarbital daily.

The group consisted of 15 patients, all of whom were male, since this study was carried out on the male services. Eight of the patients were white and 7 were colored. The diagnoses in these cases were "psychosis with convulsive disorder," 11; general paresis, 3; "psychosis with organic brain disease," 1. Most of the patients in the study were having 3 or 4 convulsions a month in spite of their medication. This varied from 1 or 2 a month to as many as 9 or 10 a month in 1 case. Twelve patients were receiving phenobarbital and dilantin daily, 2 phenobarbital alone, and 1 tridione alone. Several of the patients in the series were, in addition to their epilepsy, frequently assaultive and behavior problems. The use of mesantoin was instituted in May 1947 and has been continued to date.

Before reporting on the results, I might emphasize something that others have stressed and that is also stressed by the manufacturers of the drug: namely, that in changing to mesantoin, the change should be accomplished gradually over a period of weeks, with the old medication being gradually reduced and the new medication gradually increased until transition is complete. Failure to do this may result in a flurry of convulsions or status epilepticus.

Mesantoin alone was given in 12 cases. In 2 cases it was given along with phenobarbital, and in 1 case along with dilantin. There is no contradiction to the use of a combination of these drugs, and phenobarbital and mesantoin often make an effective combination. The dosage of the mesantoin was 9 grains (0.6 Gm.) daily in 8 cases, 12 grains (0.8 Gm.) daily in 3, and 15 grains (1.0 Gm.) daily in 3 others. When 1 dose is larger than the others, it is often best to give the larger dose at night when there is the greatest time interval between doses, particularly if the convulsions tend to occur at night. For example, if the daily dose is 15 grains (1.0 Gm.), one can give 4½ grains (0.3 Gm.) morning and noon and 6 grains (0.4 Gm.) in the evening. Side reactions observed included drowsiness in 3 cases. This was in each case obviated by reducing the medication. Later it was possible to increase the medication without recurrence of the drowsiness. Fever was encountered in 1 case and subsided when the drug was temporarily discontinued. These were the only side reactions observed in this group. The blood picture was checked in all cases (hemoglobin, white blood cell count, red blood cell count), and in none was there evidence of any dyscrasia. Of the 15 cases, 6 patients were regarded as much improved in that there were no convulsions; 8 were regarded as improved in that the frequency and severity of their convulsions were noticeably reduced, and only 1 was regarded as unimproved, in that there was no change or improvement in the frequency of convulsions. In 3 cases an improvement in general behavior and tractability was evident and was commented on.

SUMMARY AND CONCLUSIONS

There is presented a report on the use of mesantoin (3 methyl 5,5 phenyl-ethyl hydantoin) in a series of 15 hospitalized male psychotic epileptics. Eight of the patients were white and 7 were colored. The diagnoses were "psychosis with convulsive disorder," general paresis, and "psychosis with organic brain disease." All of these patients were poorly controlled on their previous medication. Mesantoin was given in doses of 9 to 15 grains (0.6 to 1.0 Gm.) daily. In 2 cases it was combined with phenobarbital and in 1 with dilantin. The only side reactions encountered were drowsiness in 3 cases and fever in 1. These were readily handled by adjusting the dosage. Six patients were much improved, 8 improved, and only 1 unimproved. Three patients with behavior problems showed improvement in their general behavior.

It is concluded that mesantoin is a valuable drug in the treatment of epilepsy. It has fewer side reactions than dilantin and can be tolerated in larger doses. It can be given in combination with dilantin or phenobarbital and seems particularly effective in combination with the latter. Many studies about its use in epilepsy, petit mal, and psychomotor equivalents are going on and doubtless will be reported in the literature. It is well to stress the importance of a gradual change of medication in first instituting a new drug. The blood count probably should be checked from time to time.

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NITROFURAZONE IN THE TREATMENT OF IMPETIGO

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NITROFURAZONE N.N.R. (Furacin) is a synthetic nitrofuran (5-nitro-2-furaldehyde semi-carbazone) whose wide range of antibacterial activity was discovered by Dodd and Stillman[1] in 1944. Since then there have been several reports on the use of this agent in treating surface infections.[2-9] Favorable results with the use of furacin for impetigo have been reported in 5 of these articles.[5-9] Because we have had satisfactory results with this new antibacterial agent in impetigo, we are making the following clinical report.

The drug was employed in the form of Furacin Soluble Dressing (Eaton), which contains 0.2 per cent nitrofurazone in a water-soluble ointment base composed of polyethylene glycols. The patients comprised two groups: 43 private office patients and 7 at an outpatient clinic. All had typical impetigo contagiosa, usually on the face. Ages varied from 6 months to 50 years; both sexes were equally represented.

The therapeutic technic was as follows: The lesions were débrided and swabbed with 1 per cent aqueous silver nitrate solution. Ultraviolet radiation from a hot quartz (Alpine) lamp was applied for a few minutes and the lesions were then covered with the furacin ointment, usually without a gauze dressing. The patient was instructed to remove the crusts, apply the furacin twice a day, and to return to the office in 3 to 4 days, when the above described therapy was repeated if indicated. This was continued until the patient was discharged as cured.

RESULTS

Of the 50 patients receiving the treatment, 41 were cured; 7 patients could not be followed; and in 2 cases the treatment was unsuccessful. One of these failures was due to sensitivity to the preparation, which necessitated discontinuance of the drug; and in the other case there was frank failure. Both of these cases responded satisfactorily to ammoniated mercury ointment.

The time of cure was recorded whenever possible. In the 29 patients whose records are complete it varied from 3 to 11 days, with an average time of cure of 7 days. This is identical with the average time reported by the Robinsons[8] for the cure of 11 cases of impetigo with furacin and is comparable to the median time of cure of 8 days in the 16 cases of impetigo reported by Miller et al.[9]

It is difficult to determine the accurate percentage of cure in our cases because the course of the previously mentioned 7 patients is unknown. If we consider all the patients as cured (which is a fair possibility, since all of these 7 incompletely followed patients were private patients, and most of them had improved on their last office visit), then we have an effective percentage of 96. Even by the most conservative analysis of these cases, we feel the percentage of cure would not be less than 90. The Robinsons[8] reported 1 failure in their 37 cases, and Miller et al[9] had 1 failure in their 16 cases.

SENSITIZATION

As is the case with most modern antibacterial agents, some cases of sensitization have been reported following the use of furacin. From reports published to date[2–9] which include many different diseases, the average incidence of sensitization appears to be about 4 per cent. In our cases the incidence is estimated to be from 1 to 2 per cent.

Our case of sensitization presented the following details: H.H., a 47-year-old white male, developed a typical impetigo contagiosa of the face. The day after Furacin Soluble Dressing was applied to his face, the patient developed a blotchy, red dermatitis of the face and neck. This was assumed to be due to furacin because the area of dermatitis corresponded exactly to the area in contact with the ointment, and because the reaction subsided within 24 hours after the withdrawal of the furacin. A patch test was not done for fear of aggravating the existing dermatitis. This patient had no knowledge of a previous use of furacin.

We have used furacin in many other infectious skin conditions with encouraging results and have seen only 2 other cases of probable sensitization to it. One of these was a patient who had used the drug for an unknown length of time on infected varicose ulcers and when seen by us presented a diffuse, red, scaly dermatitis of the hands, wrists, feet and ankles. There was a 3-plus reaction to the patch test after 24 hours, with an eczematous reaction in that area a week later. The other case was a white male 45 years of age who had an infectious eczematoid dermatitis of the legs. He had used the ointment in generous amounts over both legs and for a relatively long period of time. He had a positive patch test, and improved after withdrawal of the medication.

It is probable that with the wider use of furacin a higher incidence of cutaneous sensitization will occur as has been the experience with the sulfonamides and penicillin. However, since the drug is used only locally, and not given internally, this is not a serious contraindication. For this reason we feel that furacin may be preferable to other commonly used local antiseptics.

SUMMARY AND CONCLUSIONS

1. Fifty patients with impetigo contagiosa were effectively treated with Nitrofurazone N.N.R. (Furacin Soluble Dressing) as a therapeutic adjunct.

2. Cures were obtained in all except 2 cases. One was a case of sensitization to furacin and the other a frank failure. Seven cases had inadequate follow-up. The therapeutic effectiveness of furacin in impetigo is felt to be from 90 to 95 per cent.

3. The average time of cure was 7 days, as determined in 29 cases.

4. Apparently there is a relatively low incidence of sensitization to furacin when it is used over rather small areas and for relatively short periods of time.

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President's Page

'.. WORKING FOR WORTHWHILE GOALS ...'

With this issue of the MEDICAL ANNALS, the full list of committee assignments for the coming year is published. Believing that changes in these assignments should be made with reasonable frequency in order to bring in new thought, and to widen the participation of the membership, I have made a good many changes. This is in no sense a criticism of the work done by earlier committee members, who have served faithfully and well.

Unless we give our younger members the opportunity to serve, they will not learn their way around in the Society's various activities. There are many men and women who have served with distinction, often, and for long periods, who merit release from the responsibilities they so willingly assumed. They deserve the thanks of the Society and of the profession.

Many members kindly and generously offered their services for committee work. After long experience, I believe that small committees are far more effective than large ones, and it has not been possible in every instance, on this account, to give assignments to all of those who volunteered. This I sincerely regret, and I hope it will not lessen the interest of these loyal members in the work of the Society.

I hope that the new appointees will meet the challenge which I am sure they will find in the duties assigned to them; and find, too, the deep pleasure and satisfaction of working for worthwhile goals with their professional colleagues.

John Minor

Editorials

TREATMENT OF HEART FAILURE

Although there is nothing really new in the treatment of congestive heart failure, it must be acknowledged that the more judicious use of the old methods has led to some improvement in outlook for the cardiac patient. The mainstays of treatment are still digitalis and restriction of activity. In connection with these items, the chief recent advances concern the use of the pure glycosides of digitalis, a subject fully covered in an editorial in the ANNALS by Roberts,[1] and a more sensible regulation of inactivity so that strict recumbency is avoided.

Interest in the sodium intake of the patient with heart failure has become almost an obsession. For many years it was customary to treat the dropsical patient by restricting his intake of salt and water. It is now generally accepted that such liquid restriction is entirely illogical. As a matter of fact, a daily allowance of 2,500 to 3,000 c.c. of liquid should be assured. With regard to curtailment of salt, it is now understood that the important feature of this method is actually that sodium intake is diminished. This can be accomplished at the outset by prescribing a liter of milk a day and no other food except perhaps some boiled rice to assuage hunger. This regimen holds the salt intake to about a gram a day but can seldom be used for more than 5 or 6 days at a time for obvious reasons. Arrangement of the diet so that it will be adequate in all respects save palatability and at the same time low in sodium is not particularly difficult. Nevertheless, it remains almost impossible to obtain this kind of diet in most hospitals. This defect in hospital practice has been surprisingly slow to be corrected.

Another notable advance in cardiac therapy is the suggestion of Gold and his co-workers,[2] that mercurial diuretics be employed in a kind of maintenance technic. Formerly it has been the practice to administer a dose of a suitable mercurial when edema persists in spite of other measures. Subsequent doses were given whenever necessary, as judged by the reappearance of edema. According to this method, the therapy was always *behind* the symptoms of heart failure. Gold advocates that the administration of the mercurials be frequent enough to prevent the development of congestive phenomena. This is accomplished by giving daily doses at first, until the patient's weight no longer declines as a result of the diuretic effect. This "dry weight" of the patient then is maintained by administering the mercurial at whatever interval proves to be necessary in the individual case.

This method of using mercurial diuretics is so plausible and so simple that it cannot help having a widespread appeal. Used in conjunction with digitalis and sodium restriction, it affords a quicker recovery from heart failure and a much greater stability for the cardiac patient. Also, the frequent administration of a mercurial diuretic makes it possible to give a more liberal diet, since the diuretic causes increased sodium excretion.

To date it is apparent that the modern therapy of congestive heart failure expedites recovery, shortens the period of hospitalization, and maintains the patient in comparative comfort for long periods. It is refreshing to discover renewed interest in a field that has been static so long. It will be interesting to see whether or not real improvement in prognosis will result.

H. H. H.

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RESPITE FOR NATIONAL HEALTH LEGISLATION

The Brookings report and Senate Resolution 249 signal a dramatic change in the troubled period confronting the American physician. It was not long ago that we had good reason to be apprehensive of a Congress giving serious consideration to the enactment of compulsory national health insurance. Pressure for such legislation was intense. Many prominent and sincere men testified in its behalf and the leaders of organized labor vigorously supported it. Coming before the Senate Subcommittee on Health there was a veritable parade of lawyers, economists, farmers, and social workers posing as health experts and glibly citing "statistics" to show the callous betrayal of the low-income groups by the medical profession.

Until late in 1947 few questions were asked as to where these "experts" got their "statistics," despite the fact that the same bizarre distortions of the truth came out of many mouths in almost the same words. With the notable exception of the *Christian Science Monitor*, our great newspapers did a miserable job of reporting. On the question of medical care their pages gave more emphasis to the opinions of a labor leader or a politically prominent lay person than to the sober judgment of a competent medical scholar. Our daily papers did not reveal the fact that a few Governmental employees in the Federal Security Administration, completely committed to compulsory health insurance, had supplied all of the "statistics" and "evidence" cited by the experts at the Committee hearings.

By virtue of the brilliant conduct of the Committee hearings by Senator Forrest Donnell (Missouri), and through his searching cross examinations, the records of the Subcommittee on Health now contain a series of serious challenges to the statements made by members of the Federal Security Administration over a period of years. Indeed, these records, which now include the detailed Brookings report, cast considerable doubt on the reliability of published documents of this Federal agency.

In a report which accompanies Senate Resolution 249 the Senate Subcommittee on Health specifically acknowledges that the existence of a serious national health problem is a debatable question and that the available evidence does not justify the framing of any legislation at this time. In brief, there is no immediate prospect of any National health legislation.

Yet we cannot afford to congratulate ourselves on the present respite. We cannot assume that the future is safe. It most definitely is not. The general public has not read the Brookings report and is completely oblivious to what has happened in the Committee hearings during the past year. The average lay person is still under the impression that our health services are woefully inadequate and that the cost of medical care could be significantly reduced by Nationwide health insurance.

The immediate future, therefore, presents the medical profession with a great opportunity and a heavy responsibility. We must teach the public how to measure the health of the community and how to assess the relative importance of physicians' services in community health. The average man and woman must be made to realize that the attainment and preservation of good health is not merely a matter of doctors, medicines, and hospitals. Each county medical society must assume the responsibility for the educational campaign in its own community. For the success of such a campaign it would be well to enlist the coöperation of the churches, the labor organizations, and other public-spirited civic groups.

There is no need for special pleading with the laiety. We have nothing to conceal. Our only interest should be the presentation of the plain, unvarnished facts to the general public as fairly as we can. The facts are on our side. The medical profession has nothing to fear from the truth.

Maurice H. Friedman, M.D.

PENICILLIN ERA IN THE CONTROL OF GONORRHEA

The treatment of gonorrhea has passed through many eras, from the ancient, empirical administration of potions to the present specific administration of penicillin. The cumulative evidence of five years' experience has not, as yet, demonstrated a bacteriologically proven case of gonorrhea that is completely resistant to the administration of penicillin. All available experimental studies, carefully controlled, to date, indicate that 200,000 units of aqueous penicillin given in divided doses over a period of 4 hours, or 300,000 units of penicillin in oil and beeswax given as a single injection, will cure over 90 per cent of cases. The administration of larger doses of either form of penicillin will cure, bacteriologically, those not cured by the initial injection.

Reports on the increasing incidence of these infections both locally as well as for the country at large must manifestly be interpreted carefully. In view of the well known secrecy which surrounded these infections in the past, and the popular prejudice to discuss them up to the time when former Surgeon General of the U. S. Public Health Service, Dr. Parran, brought them into the light of publicity, we must undoubtedly consider these popular attitudes a factor which would influence the present picture and result in an apparent increase in the number of cases. What appears, therefore, in the face of the present well known methods of treating these infections should not be interpreted as a failure in therapy but should rather serve as a stimulus to secure fuller reporting of larger numbers to treatment sources.

The failure to bring gonorrhea under control, in spite of a very effective, rapid means of cure, is influenced by many factors. Some of these are mentioned: Infected people do not recognize their symptoms as being due to gonorrhea; they consider the symptoms, if present, as only a mild inconvenience; they don't recognize the disease's high communicability—people are ashamed—don't dare see a doctor because of fear of being found out—consider the disease a personal stigma which they wish to keep hidden; are not able to meet the cost of treatment; are not sufficiently persuaded to influence their sexual partners to be examined and treated. The role of the female in acting as a reservoir of infection should be emphasized particularly because, of reported cases, less than a third, 32 per cent, are women.

The profession and public health agencies must unite in all phases of attack on the problem. Coöperative projects of research in diagnosis and treatment, in influencing the infected person to seek treatment, in dispelling the ignorance of symptoms, and in alleviating the fears and embarrassment in seeking treatment have indicated the means for control. There is little excuse for failure except in applying the means we have at hand.

The profession can exert a powerful influence in the development of a program aimed at the eradication of the disease. The widespread network of physicians' offices cover the city with convenient treatment stations. The close rapport between physician and patient, wisely exploited, can relieve the patient of his fears and inhibitions, inform him of signs and symptoms, and influence him to persuade his sex partners to seek examination and treatment. The patient's ability to bear the expense of treatment can be explored, fees can be adjusted if indicated, and if inability to pay is determined, referral to free treatment sources can be accomplished.

The elimination of gonorrhea from Washington can be realized. Victory depends upon a continuing intensive attack to kill the gonococcus in every infected individual.

S. Ross Taggart, M.D.
Director, Bureau of Venereal Diseases, District Health Department

Washington Physicians of Yesterday

DANIEL WEBSTER PRENTISS, SENIOR, B.Ph., A.M., M.D.

In addition to prominence as a medical practitioner and teacher, Dr. Daniel Webster Prentiss had the special distinction of having been intimately associated with the scientific leaders and activities of his time.

Born May 21, 1843, in Washington, D. C., he received the degrees of B.Ph. in 1861, and of A.M. in 1864, from Columbian (now George Washington) University; and of M.D. in 1864 from the University of Pennsylvania. He was Acting Assistant Surgeon in the United States Army 1864–65. For the remainder of his life from that time on he engaged in the general practice of medicine in Washington. He was connected with the Columbia Dispensary (eye and ear service) 1874–78, and visiting physician to Providence Hospital 1882. He was a member of the District of Columbia Board of Health 1864; and Commissioner of Pharmacy for the District, President from 1888.

A medical teacher of note, he served as Professor of Materia Medica and Therapeutics in the Medical School of Columbian University 1879–99, and was a recognized authority in that field. He was also Lecturer, Dean, Trustee, and President of the Nurses' Training School to 1884.

He was an active member of many local and national medical and scientific societies. He became a member of the District of Columbia Medical Society in 1864, its President in 1891; he joined the District Medical Association in 1865, and served as its President in 1899, dying during his term of that office. In the local medical organizations he rendered active committee service, including membership in the Board of Examiners for licensure of physicians.

(*Continued on page 480*)

REPORT OF DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

The ninety-seventh Annual Session of the American Medical Association, which was held in Chicago, June 21–25, 1948, was marked by outstanding events, characteristic of this age of progress. For example, television was utilized, giving evidence that this instrument will make available to thousands more intimate detail of surgical operations than formerly was possible to the privileged two to five observers in the operating room.

Constructive attitudes with an awareness of the real basic problems confronting the public and the profession were everywhere manifest in the reports of the various councils, in the addresses of the President and the President-elect, and in the large number of resolutions introduced. Resolutions having to do with the Red Cross Blood Banks, which had been approved in principle at two previous sessions, showed that in many areas of the country there were some angles of this project that needed clarification. A final report from a reference committee makes it now clear that local control of blood banks must be lodged in the county society. Publicity and news releases are to be cleared through the same agency. The use of the expression "FREE BLOOD" in publicity channels was deplored. The important advisory committee from the AMA, of which Dr. Herbert P. Ramsey is a member, is to have its membership increased to nine. It was ordered to report at each House of Delegates' Session.

Numerous resolutions relating to the action by the AMA Headquarters in terminating their contract with Blue Cross for coverage of its employees were presented. Upon instruction of our Executive Board, your senior delegate introduced the following resolution:

"WHEREAS during the past several years, employees of the American Medical Association have been covered by Blue Cross; and

"WHEREAS the Blue Cross found it necessary to increase its rates and, when its officials were questioned by officers of the American Medical Association with regard to further increases, could give no assurances that they would not occur; and

"WHEREAS the American Medical Association saw fit to withdraw its hospitalization coverage from Blue Cross, contracting with a commercial insurance carrier for hospitalization and medical service coverage for its employees:

"BE IT RESOLVED, The Medical Society of the District of Columbia deplores the American Medical Association's failure to support voluntary non-profit hospital and medical care plans believing it will greatly handicap these plans in the future. It recommends that the Board of Trustees of the AMA instruct the Secretary and General Manager to negotiate with Blue Cross officials in an effort to reinstate the contract for the coverage of AMA employees at the expiration of its present policy."

In commenting on this resolution, AMA officials stated that Blue Cross coverage for its employees (hospitalization) was carried for one year. Rates were increased after being in force two months, although the raise was not considered a probability when the contract was signed. The AMA was paying 50 per cent of individual employees' coverage. The Board of Trustees, rather than demand more payment from employees, paid out of the Association's funds between $1,600 and $1,700. Blue Cross on March 5, 1945, cost 90 cents per employee per month. This was raised to $1.25 during the year and early in 1948 to $1.40. Present coverage for hospital, medical and surgical fees is $1.98 per employee. The AMA pays one half and the employee one half. Selection of carrier was made in every instance by the Board of Trustees on figures presented, carriers' names being unknown.

Reference Committee, to which this matter was referred, recommended after consideration of the entire situation, that the Blue Cross be approved as carrier.

In connection with Blue Cross and Blue Shield, Dr. Paul R. Hawley, Chief Executive Officer, read a speech in abridged form that he had originally presented at the 4th Annual Conference of Presidents and Other Officers of State Medical Societies. Quoting from his speech, "The dangers that threaten the free practice of medicine in this country are fast becoming critical, and still we delay in uniting in decisive action to meet them. . . . I am . . . certain if this convention fails to encourage and support expansion of the Blue Shield movement the death knell of free medicine in this country will have been sounded."

Financing of medical education was a live topic. Should it be by the Federal Government or should an attempt be made to gain support through private sources of revenue? It would seem by action of the Board of Trustees in approving a June 23rd recommendation of the Council on Medical Education and Hospitals and by subsequent action of the House of Delegates that a constructive step is to be taken in averting further Federal aid with its implications of control by establishing a national foundation to secure monies from the general public in support of medical education.

There was adopted the report of a Special Committee on Nursing Problems created by the House at Atlantic City in 1947, headed by Dr. Thomas P. Murdock of Connecticut. The comprehensive report of this Committee's study included, among many other things, a recommendation for the provision of two groups of nurses, the professional nurse and the *trained* practical nurse and set up standards for the training of the latter group.

Of much importance was the report of the Committee on Revision of Constitution and By-laws. The delegates in session considered the newly revised Constitution and By-laws item by item. Finally it was adopted when approved in its final form. In reference to Chapter 2 of the By-laws on membership, "A member shall hold his membership through the constituent association in the jurisdiction in which he practices," your senior delegate asked Dr. F. F. Borzell, Chairman of the Committee, in a query from the floor for an interpretation, citing specifically the situation in Washington with neighboring Maryland and Virginia. He was informed that a physician practicing in two jurisdictions could *select* the constituent body he wanted to join as a member. This decision may be a foundation for a Greater Washington Medical Organization.

A revision of the "Principles of Medical Ethics" was received from the Judicial Council. The new text was discussed, amended, and then recommitted to the Judicial Council for further study.

Drs. Isaac A. Abt, Alfred Blalock and Seale Harris were candidates for the Distinguished Service Medal. The count of the ballots revealed Dr. Abt had received the majority of the votes and therefore received the honor for 1948.

In the elections, Dr. Ernest E. Irons of Chicago was made President-elect. Dr. Irons has just served seven years as the Illinois member of the Board of Trustees. Dr. Roy L. Fouts of Omaha, Nebraska, was elected Vice President. Dr. Fouts has long been a member of the House of Delegates. He served as Vice Speaker of the House during the terms of Dr. Harrison H. Shoulders of Nashville, Tennessee, as Speaker, and in recent years succeeded Dr. Shoulders in the office of Speaker of the House. The recent Vice Speaker, Dr. Frank F. Borzell of Philadelphia, was elected Speaker, and Dr. James R. Reuling of Bayside, Long Island, was elected Vice Speaker.

Three vacancies in the Board of Trustees were filled. The vacancy occasioned by the death of the late Dr. C. W. Roberts of Atlanta, Georgia, which had been filled ad interim by Dr. Wingate Johnson of Winston-Salem, N. C., was filled by the election of Dr. Walter B. Martin of Norfolk, Virginia, whose term as a member of the Council on Medical Service has just expired. The vacancy left by the retirement of Dr. William F. Braasch of the Mayo Clinic was filled by the election of Dr. Gunnar Gunderson of LaCrosse, Wisconsin. Dr. Edwin S. Hamilton of Kankakee, Illinois, was elected to the place left vacant by Dr. Irons (*vide supra*).

One of your delegates was appointed Chairman of the Committee on Rules and Order of Business, which determined the conduct of the elections.

It is earnestly suggested that members read the minutes* of this Ninety-seventh Annual Session which are now appearing serially in the Journal of the AMA, (issues of July 3, 10, and 17, 1948). "An informed membership makes an effective Society."

Respectfully submitted,
COURSEN B. CONKLIN, M.D.
HERBERT P. RAMSEY, M.D.
Delegates

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*The minutes make frequent reference to reports appearing in the "Handbook." All delegates had the handbook, but unfortunately, such portions of text are not repeated in the minutes. A copy is available at the Society's office for reference but cannot be taken out.

MEDICAL ETHICS: THEORY AND PRACTICE*

Arthur C. Christie, M.D., F.A.C.P.

Chief of the Department of Radiology, Doctors Hospital

The fundamental importance of ethical principles in the practice of medicine has been recognized since the earliest days of the healing art. The first ethical code originated in the golden age of Greece and is attributed to the "Father of Medicine." The main affirmations of the "Oath of Hippocrates" are valid even to the present day although they need restatement in modern categories to render them fully intelligible to the modern physician, and to rekindle in them the inspiration which they must once have had for the young doctor who was dedicating his life to his profession. The "Oath" had its origin during those centuries preceding the Christian era when Greek thinkers were laying the foundations of philosophical thought. All of the Greek philosophers gave to ethical principles a central place in philosophy. Plato recognized four kinds of goodness, in later times called the "Cardinal Virtues"—Wisdom, Justice, Courage and Temperance. The ethical implications of all of them are apparent if it is remembered that "wisdom" to the Greek thinkers meant not only knowledge of the truth but knowledge which results in the good life. The ideal of the Greek philosopher was not only the wise but the good man. Aristotle, the realist, he who was the originator of inductive reasoning, taught that the good life consists both in well-being and well-doing.

This is not the place, even if the present writer had the requisite scholarship, to review the history of the philosophy of ethics; the cynic, the stoic, the neoplatonist, the humanist, the apostle of free will, the determinist, the hedonist of many varieties, the evolutionist, the pragmatist and the theologian, all have made their contributions to the discussion which has continued through the centuries down to the present day. My purpose in directing attention to the historical origin and development of ethical principles and practice is to indicate that the science of ethics has its foundations in the philosophical quest for truth; that it has engaged the thought of great thinkers of every age; and that it is based upon postulates which are now almost universally recognized as absolute.

For nearly a century and a half the physicians of English-speaking countries have accepted as their guide to ethical conduct a code devised by Thomas Percival of Manchester, England, and published in 1803. The American Medical Association based its first "Code of Medical Ethics," adopted in 1847, upon the code of Percival. In 1903 the title was changed to "Principles of Medical Ethics," but in spite of the change of name it remains to this day a set of rules to apply to conduct under certain conditions and circumstances. It was rewritten in 1912, and in 1946 the House of Delegates of the American Medical Association requested the Judicial Council to study the "Principles of Medical Ethics" with a view to their revision and restatement. It seems important under present conditions of social unrest and of adjustment of the medical profession to social changes that such a study should recognize the fact that ethics is not only a system of conduct to which specific rules are applicable, but that it is also a science of morals based upon fundamental conceptions of the nature of man and his relationships. Rules attain validity and compulsion for action only if the fundamental principles upon which they are based are themselves valid.

Does it not seem appropriate, then, to suggest that revision of the "Principles of Medical Ethics" should contemplate division into two parts? The first would state the principles of ethics and give an explanation of their meaning based upon consideration of their historical development and the philosophy upon which they depend. The second would be the code of conduct applying to specific conditions or circumstances. The latter would be brought up to date to include practices relating to industrial medicine, hospital relationships, insurance organizations, etc. It would seem desirable, also, that the code should be accompanied by an explanation of the rules, indicating their relation to the general principles set forth in the first part. Such explanations would serve to show that the rules are not arbitrary but are based upon principles of moral law. They might also reveal the fact that some of the rules have no such basis and should be eliminated or relegated to a section on manners or etiquette. Until rules for conduct are recognized as a reasonable implementation of ideals and principles which are universally accepted as true, there can be no compelling conviction on the part of either the profession or the laity that they should govern conduct. It also follows that in the absence of a clear statement of ethical principles there exists no recognized standard for judging the ethical soundness of proposed new plans for medical care.

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* The second lecture in the Orientation Course for new members of the Society, April 10, 1948.

What are the essential underlying principles upon which medical ethics must be based? They may be variously stated but they are the same principles that underlie ethics in general.

1. *Recognition of the dignity and worth of the individual human being.* This principle is the foundation of democracy and one of the essential postulates of Christianity. The preamble to the Constitution of the United States begins with the words, "We the people. . . ." This phrase was adopted only after long debate in the Constitutional Convention. It implicity recognizes the fact that the source of the power of government resides in the people themselves. It sets up a sharp dividing line between the democratic and totalitarian philosophies. Belief in the ultimate worth of the person carries with it the conviction that individuals must not be dominated by an autocratic state, nor lost in a totalitarian society, nor submerged in a collectivistic economic system.

The ideal of the medical profession from its earliest days has been to conserve human life and to allay human suffering. The individual is so essentially important that he must be cared for regardless of the doctor's personal comfort, his health or safety, or any consideration of material reward. Perhaps this matter of the importance of the person would not seem so vital to me had I not spent many days and nights during my boyhood riding over the roads of northwestern Pennsylvania with my father, a country doctor, upon his constant rounds attending the sick. It was not so much by anything that he ever said to me but by the consistent example of one who never spared himself that I became imbued with the conviction that people are very important. They might appear to be utterly ordinary or repulsive because of ignorance or disease, or so aged and decrepit that there seemed little object in prolonging their lives, nevertheless I gradually learned that to the good physician no one is too young or too old, too rich or too poor, too good or too sinful, to need and obtain the doctor's sympathy and care. So well did I learn that lesson that throughout my life nothing has seemed so important to me as human personality. However much in later years I became interested in social welfare, "society" was never spelled in my mind with a capital letter. Society has always been an aggregation of erring and needy individuals, many of whom are sick. A "good society" became not an object in itself but only an environment for the benefit of the individual, a means to an end.

That such idealism is uncommon in the medical profession of this country, as is often claimed, is untrue. Doubtless there is a small minority which deserves the satire of a Molière or the cynical caricatures of George Bernard Shaw or Sinclair Lewis. The everyday service of physicians throughout the land is sufficient proof that the doctor still recognizes his spiritual prototype in the high-minded and cultured Lydgate, or the kindly, self-sacrificing William MacClure, or the well-poised, courageous Gideon Gray. In real life, his ideals have been Jenner, Lister, Pasteur and Osler and many another physician or scientist of noble life and significant achievement.

The hedonist rejects such idealism as unrealistic; the real rewards of life in his philosophy are wealth, power and pleasure. The cynic scoffs at them as impractical; they are beyond the reach of poor human nature, and to use them as practical guides is to foster sham and hypocrisy. I look upon the belief in human worth not only as one of the noblest ideals but as one of the most powerful forces in history. Its influence is seen in the progress of democracy through all of the critical efforts of men to emancipate themselves. The outcome of the world struggle in which we are engaged today depends upon the devotion of the Western World to the belief in individual worth.

Even though there are many who hold that such ideals are impractical in medical practice, it would demonstrate a statesmanlike view of our duties and responsibilities to set them up as the standard of the medical profession. In 1787 the Constitutional Convention had reached a low ebb when George

Washington sent it back to its task with the following oft-quoted remark: "It is too probable that no plan we propose will be adopted. . . . If to please the people, we offer what we ourselves disapprove, how can we afterwards defend our work? Let us raise a standard to which the wise and the honest can repair. The rest is in the hand of God."

2. *The right of every person to freedom of expression, worship and action.* This is the second principle which should appear near the top of the "Principles of Medical Ethics." The only limitation to be placed upon it is that freedom of the individual shall not infringe upon the freedom of others.

This principle is also an essential one in democracy. Much of the discussion in the days of the formation of the government of the United States revolved about the question of personal freedom. How much of individual freedom must be relinquished in order to establish a stable society in which men could live together in safety and security? Many of the states would not approve the Constitution until they were given assurance that a "Bill of Rights" would be added to give guaranties that the liberties which they held dear would not be encroached upon by an autocratic government. They believed, as Woodrow Wilson stated many years later, that "The history of liberty is the history of the limitation of governmental power." History also demonstrates that progress depends upon the individual's freedom to think, to aspire, to act and to express himself.

The progress of medicine and the level of medical practice at any given time are greatly influenced by the presence or absence of individual freedom of thought and action. A recent occurrence illustrates the importance of freedom in the minds of scientists. Following a report entitled "Science, the Endless Frontier," made by Dr. Vannevar Bush in 1945, it was thought to be highly desirable to establish a National Science Foundation within the Government. A bill authorizing it was passed after two years of committee hearings and debate in both houses of Congress, only to meet with a presidential veto. The principal reasons for the veto were the provisions of the bill which placed administrative control of the Foundation largely in the hands of its members rather than in those of administrative officers of the Government. The scientists contend that there must be a high degree of freedom of both thought and action within the Foundation if scientific research and the training of scientists are to be carried on effectively. Such freedom, they believe, cannot be maintained under complete governmental administrative control. How freedom of research and educational procedure can be assured and at the same time governmental administrative control maintained in a "Science Foundation" is not yet clear.

The freedom of the patient to choose his own physician is a principle of medical ethics the importance of which is generally recognized. Even those who recommend new types of medical practice such as compulsory health insurance are at pains to maintain that, in their opinion, it would not interfere with free choice of physician. This insistence upon freedom of choice derives from the recognition of the importance of maintaining a close personal relationship between patient and physician. The patient is something more than a physical mechanism; he is a personality who requires not merely repairs to machinery but understanding, sympathy and affection. The modern physician must strike a new balance in his methods of practice. He must use all of the aids provided by modern medical science but at the same time he must maintain a close personal relationship with his patient. It is not merely for the sake of idealism, nor for any selfish consideration, that the physician insists upon retaining this relationship, but because it is an essential element in medical practice. The best interests of the patient require that he have full confidence in the physician's ability, integrity and discretion so that he may feel free to disclose for purposes of diagnosis and treatment the most private and confidential information concerning himself. Herein lies the principal reason for "freedom of choice." The patient is not choosing one who is to give him some kind of mechanical service or economic advice but one who is to become his confidant and friend. Such relationships are also the reason why the physician considers it unethical to advertise himself or to solicit patients in any way. Here also is the ethical basis for the "privileged communication."

It is true that in compensation practice and industrial medicine, where an insurance carrier or an employer may be an interested party, special rules of procedure must be set up. Where in the very nature of the case the patient cannot choose his physician for the limited service connected with his occupation, the rules of procedure should carefully conserve his right to choose his own physician for general medical care.

Individual freedom cannot be established as a principle of medical ethics unless at the same time the weighty responsibilities that accompany such freedom are accepted. Freedom, as the modern doctor must understand it, is no crass individualism which ignores or opposes the need for changes to adapt medical practice to the complex needs of modern society. For example, the majority of physicians believe that a system of compulsory health insurance would retard medical progress, lower the quality of medical care which the people receive, and interpose an unwieldy, expensive governmental bureaucracy between the doctor and the patient. If the physician is to feel free to oppose such a measure, he must offer other means to solve the problems which compulsory insurance is supposed to meet. His best efforts must be engaged in the establishment of voluntary types of insurance which will free the majority of the people from the high costs of hospitalization and of certain types of medical and surgical care. This is an ethical obligation which every member of the medical profession should willingly assume.

Freedom of the individual then, including both the physician and the patient, is a standard which we may rightly include as a fundamental principle of medical ethics. At the same time, its duties, obligations, and limitations must be fully accepted.

3. *The right of every human being to justice.* The struggle of the common man for justice is one of the outstanding characteristics of modern times. Its rise marks the dividing line between the Dark Ages, when man fatalistically accepted his lot, and the Modern Era, when he sought and obtained a high degree of freedom and justice under law. It has progressed from the adoption of Magna Charta in 1215 through the centuries of struggle to establish parliamentarianism in England, to the American and French Revolutions, and the adoption of the Constitution of the United States. That there are still large areas in which the struggle continues is attested by the racial and class contests of the present day. During this long struggle the idea kept emerging that freedom could not be a permanent possession of mankind until justice and fair dealing between men could be established on a permanent basis. The founders of the United States of America recognized this when they wrote in the preamble to the Constitution "to establish justice" as one of the main purposes for which "we the people" "establish and ordain this Constitution of the United States." It continued to be their aim when they added the first ten amendments restricting the powers of government in order to protect individuals and minorities from arbitrary authority. As Whitehead has said, "Law is both an engine for government and a condition restraining government." This I conceive to be the essence of the idea of justice among men, namely, the substitution of law for arbitrary rule. It means that even the heads of states must be under the law. And if the head of the state may not act arbitrarily, it follows that no one may so act, whether they be cabinet ministers, committees of Congress, commissions or boards, industrial magnates, labor unions, majorities, or organized minorities. That we are far from the full realization of this ideal is obvious. Arbitrary action is still common and it is not rendered less odious because many who act arbitrarily do so with the purpose of "doing good" to someone. The benevolent despot is only a little less objectionable than the selfish tyrant.

When we consider the principle of justice as applied to medicine in this modern age, we must view our obligations in a very broad way. It is just and right that the benefits of modern medicine should be made available to the entire Nation. The medical profession is therefore under obligation to support a wisely conceived program of public health and medical care which covers the Nation and includes all classes of the population.

The Council on Medical Service of the American Medical Association recently has stated the requirements of such a program essentially as follows: establishment of minimum standards of nutrition, housing, clothing, and recreation; preventive medical services through health departments; medical care by public funds for those unable to care for themselves; adequate prenatal and maternity care; care of the child, including nutrition, immunization, etc.; health and diagnostic centers adequate for community needs; voluntary health insurance for hospitalization and medical care; hospitalization and medical care for veterans; research for advancement of medical science, including a National Science Foundation; encouragement of volunteer philanthropic health agencies; and education of the people in health and prevention of disease by health departments, school authorities and medical associations. There are ethical implications in all of the above requirements. That they refer to such diverse matters as nutrition, housing, clothing, public health, prevention of disease, facilities for hospitalization, health education and health insurance seems to place them broadly in the field of medical economics. It cannot be too strongly emphasized, however, that medical economics is a branch of medical sociology and must be founded upon ethical principles.

The degree to which such a program can become effective will depend largely upon the support given it by the physicians of the Nation. There is thus a personal obligation upon every member of the medical profession to inform himself concerning the details of the proposed national health program and to give it enthusiastic and intelligent support wherever it is possible to do so, not only as an individual physician and citizen but through the various organizations, both medical and lay, to which he may belong.

Similarly, the profession has an even more immediate obligation to support the public health measures and programs of the local community. The physician must accept responsibility in matters of public health and prevention of disease and in the initiation and operation of plans to assure adequate medical care to the entire populace. It is not enough that he have altruistic ideals and give occasional advice but that he thoroughly inform himself concerning the civic conditions and problems of his community as they relate to health and medical care. Such problems include not only those usually considered under the heading "public health" but in addition the organization of plans for group hospitalization, voluntary medical insurance, mass surveys for tuberculosis, plans for control of cancer including cancer detection clinics, etc., etc. No physician can be expected to take part in all of the health and medical care activities of his community, but he is not fulfilling the ethical obligations of his profession unless he is engaged in some type of community service.

In addition to this wide field of general preventive medicine and medical care, the physician must be concerned with the establishment of just and right relations within his own profession. Rules should not be necessary to induce a physician to follow the common practices of an honorable gentleman in his relations with his fellows. The good doctor will constantly exercise courtesy and exhibit good will toward his colleagues, and he will not, by word or deed, intentionally injure the reputation of a fellow physician. Such courtesy and good will is common in the profession. For the small number who, through ignorance or intention, violate the canons of gentlemanly conduct, no rules will be effective. There exists a rule, however, in the "Principles of Medical Ethics," the violation of which has subjected the medical profession to much adverse criticism. The rule is as follows: "Physicians should expose without fear or favor, before the proper medical or legal tribunals, corrupt or dishonest conduct of members of the profession." It is well known that this rule is rarely observed. Lawyers complain that physicians will not testify against one of their fellows except in the most flagrant cases and they are not often disciplined by their own medical societies. So long as it remains the obligation of an individual member to prefer charges against another member and to support them before the society, there will be little hope of better observance of the rule requiring exposure of "corrupt or dishonest conduct of members of the profession." Practice within medical societies would be improved in this respect if it should become the duty of the Board of Censors of the society to initiate the charges against members guilty of misconduct, thus relieving individual members of the burden of initiating and supporting such charges. On the other hand, no doctor can afford to keep silent when he sees injury coming to a patient because of the ignorant or intentional misconduct of a member of the medical profession.

It is not necessary to say more in order to emphasize the far-reaching obligations and the weighty responsibilities of the physician to promote the ends of justice not only within his own profession but in the field of civil and social relationships.

It would be salutary for him to recall from time to time a verse from one of the ancient prophets which Theodore Roosevelt used to say was a major part of his religion: "And what doth the Lord require of thee, but to do justly, and to love mercy, and to walk humbly with thy God?"

The ideals of freedom and justice and the ultimate integrity and worth of the individual provide the only foundation which is broad enough to support the obligations of medicine in this modern day. Whether these ideals are absolute or relative from a philosophical standpoint is not of practical importance. Many of us believe that they are part of the very structure of a universe of moral purpose while others hold that they are the result of the evolution and experience of mankind. Whatever their origin they provide the highest conceivable standard for ethical theory and practice.

Acceptance of this standard involves the recognition of certain obligations and duties on the part of the physician which may be classified as duties to himself, to his professional colleagues, to his patients and to the public.

The nature of the doctor's calling frequently requires him to meet emergencies involving life and death, for which only the finest spiritual resources are adequate. He therefore owes it to himself and his patients to adopt early in his practice a sound philosophy of life. In William Osler's address entitled "Aequanimitas" he advises the doctor to cultivate an even, well-poised attitude of mind, properly described as "equanimity," which will enable him to meet the cares and stresses of his practice without undue worry. Such a philosophy can originate only in integrity of character and high ideals.

The necessity for close personal relations and close personal contacts with men, women and children in his daily practice also require the physician to cultivate ideals of honor and purity of life beyond the ordinary. The ancient Hippocratic Oath affirmed that " . . . in purity and holiness I will guard my life and my art." The "Principles of Medical Ethics" states that "no scientific attainments can compensate for the want of correct moral principles."

The requirement of personal integrity extends further to what is usually designated "mental integrity." The physician must hold himself to strict account in regard to his habits of thought and formation of judgments. He must constantly come to terms with what William James called "the irreducible and stubborn facts." Let him remember the first aphorism of Hippocrates: "Life is short; the art is long; the occasion fleeting; experience fallacious; and judgment difficult." Let him also remember that the snap judgment, the *post hoc* conclusion, the diagnosis based on insufficient evidence, the prognosis which is merely a guess, the opinion expressed only to please the patient, the guarantee of a cure, the criticism of a colleague for personal advantage, all savor of the methods of quackery, and have no place in the thought or conduct of the man of science practicing a difficult art.

A still further personal obligation of the physician is to continue his education throughout his active life. The habit of daily reading and study, the preparation of scientific papers, attendance at medical society and hospital staff meetings, and occasional postgraduate courses are as much a part of the physician's professional life as is his actual practice of medicine. His work must be organized with this in view. He must arrange with a colleague or must have associates to care for his patients in his absence. More than that, he must so manage his affairs as to be able financially to meet the demands of continuing his education in addition to providing for his other professional expenses and caring for his family.. This is not to advise undue emphasis upon money-making but only that it is the doctor's duty to adopt good business methods in conducting his practice. By charging reasonable fees, keeping a simple but adequate accounting system, and budgeting his income to allow for educational expenses, the great majority of physicians in this country can keep themselves abreast of the advances of medicine. Too much praise has been accorded to the doctor who is careless in his financial arrangements with his patients. It is probable that failure to send bills to patients is just as often due to the doctor's distaste for bookkeeping or to evasion of an unpleasant duty as to altruism. It is time to remind careless members of the profession that they have an ethical obligation to manage their financial affairs in a reasonable and careful manner. Those who do not keep accurate account of receipts and expenditures are likely in the future to have unpleasant reminders from the Bureau of Internal Revenue when their income tax returns are examined.

It has been intimated by those who are interested in new plans for medical care involving salaries for physicians that the method of charging fees for professional services is itself unethical. They assert that the physician's financial interests impel him to adopt unethical practices, such as overcharging, prolonging treatment, and making unjustified diagnoses. It is quite certain that although such practices do exist, especially in a few communities, they nevertheless are uncommon in the medical profession. It is equally certain that anyone who would pursue such immoral methods would find other unethical means to advance his selfish interests under any type of financial arrangement that could be devised. To contend that a person cannot act honestly and justly because his interests are involved is to deny the possiblity of ethical conduct except under duress.

Something must be said here concerning fee-splitting and giving of commissions. Under whatever name or guise this practice is carried on it can only be condemned. The splitting of fees between physicians leads to demoralization of those who practice it and in many cases to exploitation of the patient. The same condemnation must be accorded to the recently exposed practice of giving commissions by optical firms, radiological laboratories and others. It is true that the discrepancy is too wide between the fees received by the general practitioner on the one hand and surgical and other specialists on the other, but the splitting of fees is only to substitute one evil for another. The general practitioner is essential to the proper practice of medicine; his place cannot be taken by the specialist, the group, the clinic or the hospital staff. If the people are to have constant medical care when they require it in their homes, the general practitioner will continue to carry about eighty per cent of the load. It is time for both the profession and the laity to be aware of his important place in the care of the sick and to institute measures, educational and otherwise, to assure him of adequate remuneration for his services. The solution of this problem will be found in the gradual elevation of the level of professional ability among general practitioners so that they can perform services now too readily turned over to the specialist. As such improvement in general practice takes place a like improvement in the average level of ability of specialists will naturally follow, because the latter will become fewer in number and will really be men of extraordinary training and ability as they ought to be. There can be no argument that specialism has not contributed greatly to medical progress, but no one will contend that the best methods of training men for the specialties has yet been devised or that the methods of the certifying boards cannot be improved. The rules in our present "Principles of Medical Ethics" relating to consultations between general practitioners and specialists are important and should be more generally observed than is the present practice. Every reference of a patient to a specialist should be considered a consultation, at least to the extent that an adequate history of the case is furnished to the specialist and a written opinion with description of treatment, advised or instituted, sent promptly by the specialist to the referring physician. It is essential that doctors strive for a better integration of medical practice. When a patient seeks treatment by a specialist without reference from a general physician, the specialist is under obligation to discover if the patient has had a general medical examination and to obtain a report upon it as well as upon any special examinations which may have been made. The essential unity of medical practice must be emphasized in the minds of all concerned with the care of a patient so that each new procedure is carried out in the light of all that has preceded it.

I have now stated what in my opinion are the fundamental principles upon which medical ethics are based and have discussed briefly their origin and their relation to ethics in general. I have also pointed out some of the resulting obligations that devolve upon the physician and the organized medical profession. It must be apparent that these obligations are of tremendous importance and that they throw upon the physician a responsibility which he cannot escape without violating ethical standards. They include all that affects the peoples' health—physical, mental and spiritual. They cannot even be named, much less discussed, in a single lecture.

They involve the physician's integrity of character, his professional ability, his relations with his colleagues, his duties to his patients, his responsibilities for prevention of disease, and his duty to assist in plans to solve the economic problems of medical care.

The preparation of a system of medical ethics based upon such considerations is a major task for which there exists no precedent. Its first part, the "Principles," requires both philosophical and historical scholarship. The second part, the "Obligations," requires a thorough knowledge of modern medical practice and of the medical-economic developments of the past twenty-five years. The third part, the "Rules of Conduct," requires the collaboration of individuals engaged in many fields of medical work, including the general practitioner, specialists in various lines, the hospital administrator, the industrial surgeon, the public health officer, the director of hospitalization and medical insurance, the public health nurse, the social service worker, and the medico-legal adviser. The fourth part may be very brief and would contain much that is in the present "Principles of Medical Ethics"; it would be devoted to rules of etiquette. Such rules are related to "ethics" in that they are based upon practices of kindliness, consideration, and courtesy intended to benefit the sick person.

And now, to you who may be overwhelmed by this recital of duties and obligations and are led to feel that we have been preaching a doctrine of perfection impossible of realization, let me say a word of reassurance and optimism. It is true that we are personally responsible for our own integrity and our own professional ability. Beyond that, it is a matter of coöperative and organized effort. You are called upon only to do your part, but nevertheless it is an important part and calls for the best that you can give. In giving it you will find a satisfaction beyond anything possible to one who devotes his energies solely to his own profit and pleasure. To those of you who feel that the idealism about which we have been talking has little relation to reality, let me quote a discerning statement of Carl Schurz; "Ideals," he said, "are like stars; you cannot reach out and touch them, but like the mariner on the waste of waters with only the stars for his guide, you may accept your ideals as guide and they will lead you to your destiny." To you who are apprehensive about the future of medicine because of the threats of bureaucratic control, let me say that it is through our devotion to the ideals which we have been discussing today that we can prevent the loss of all that has made our profession great in the past. The broadening of our outlook to include the whole field of our responsibilities is a much better defense against undesirable governmental action than all of the objections that we can make. Let us at least, in the words of Washington, which I have already quoted, "set up a standard to which the wise and the honest may repair. The rest is in the hand of God."

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have been received for review:

Twentieth Century Speech and Voice Correction, edited by EMIL FROESCHELS, M.D., President, International Society for Logopedics and Phoniatrics; President, New York Society for Speech and Voice Therapy. Price, $6.00. Pp. 321. New York: Philosophical Library, 1948.

Voluntary Medical Care Insurance in the United States. FRANZ GOLDMANN, M.D. Price, $3.00. Pp. 228. New York: Columbia Univ. Press, 1948.

Manual of Veterinary Bacteriology, 5th ed. RAYMOND A. KELSER, D.V.M., A.M., PH.D., Brigadier General, United States Army, Retired; Professor of Bacteriology and Dean of the Faculty School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pa., AND HARRY W. SCHOENING, V.M.D., In Charge, Pathological Division, Bureau of Animal Industry, U. S. Department of Agriculture, Washington, D. C. Price, $6.50. Pp. 767, with 101 illustrations. Baltimore: Williams & Wilkins, 1948.

Modern Clinical Psychiatry, 3rd. ed. ARTHUR P. NOYES, M.D., Superintendent, Norristown State Hospital, Norristown, Pennsylvania. Price, $6.00. Pp. 525. Philadelphia: Saunders, 1948.

How Laymen Cut Medical Costs, from the Public Health Institute of Chicago. Pp. 35. Chicago: Lakeside Press, 1948.

Queries and Answers

Q. *What is the mortality percentage following appendectomy on women who are pregnant eight months and over?*

A. The statistics relating to this particular question are necessarily rather limited and are derived from relatively small individual experiences. However, it may be stated that the closer to term, delivery and labor a woman has an appendectomy, the higher is the mortality. If at the time of operation the appendix is unruptured and if it is removed with relatively little trauma and practically no manipulation of the uterus, the mortality rate is low. On the other hand, if the appendix is ruptured or if the uterus is manipulated a good deal, the operation is technically difficult and the mortality rate is enormously increased. If the patient delivers within the first few days following removal of a ruptured appendix the mortality rate is increased. Standard textbooks all express the fact that mortality following appendectomy in pregnancy is much higher than uncomplicated by pregnancy. DeLee's "Principles and Practice of Obstetrics," quoting Haupt, states that 25 per cent of women with acute appendicitis in the last trimester of pregnancy die. These data were published in 1937 before the introduction of sulfonamides, penicillin and streptomycin with which to combat peritonitis. While chemotherapeutic and antibiotic agents should greatly reduce the complications associated with a ruptured appendix in late pregnancy, they will in no way substitute for early and accurate diagnosis of acute unruptured appendicitis. As soon as a reasonably accurate diagnosis of acute appendicitis is made, the appendix should be removed with as little disturbance of the pregnancy as possible.

Q. *Is prolonged estrogen therapy a factor in the development of cystic changes in breast or other organs? In malignancy?*

A. This question cannot be answered with certainty. As far as our present knowledge goes, estrogen should be administered with caution and in a cyclic fashion. Joseph H. Morton (J. Clin. Endocrinol., 1946, **6**, 802) has shown that cystic mastitis of a chronic nature may be due to relative or absolute excess of estrogen when there is a diminution or absence of pregnandiol. In such instances, the administration of progesterone or the administration of chorionic gonadotropin have been found to alleviate changes in the breast. It is believed that mammary abnormalities, as well as some endometrial abnormalities, are manifestations of disturbed estrogen-progesterone balance. The endometrium of the uterus and the epithelium of the breast respond to estrogen stimulation. As for the unopposed action of estrogen therapy in the production of cancer of the endometrium or breast it has never been proven beyond a doubt that there is such a relationship. However, the literature contains many case reports, as well as reviews, in which this relationship is discussed. Even in the absence of the possibility of producing carcinoma of the breast or uterus, for the safety of the patients, prolonged therapy with estrogen material should not be given because of the functional disturbances which this hormone produces in the uterus and breasts.

Q. *What is the present concept of the relation of the administration of estrogen to the development of carcinoma in menopausal females? Is such therapy contraindicated?*

A. The use of estrogen substances in therapeutic amounts sufficient to ameliorate or completely to relieve certain symptoms associated with the menopause is not contraindicated by the fact that continuous application of these substances to the skin in mice and prolonged administration of estrogens to carcinoma-susceptible strains of mice produces carcinoma.

To our knowledge a carcinoma induced by estrogens in humans has never been reported. However, many feel that in known carcinoma of the breast, particularly following radical mammectomy, the use of estrogens for relief of menopausal symptoms is poor practice, if not because of its carcinogenic ability, because of its known physiologic effect on mammary gland tissue. Likewise, the use of estrogens in men to produce regression of metastatic carcinoma of the prostate has been discontinued after marked mammary hypertrophy for fear a carcinoma of the breast might result.

Knowledge of the relation of endocrines to carcinoma in general is still very vague and speculative. We do not know how endocrines alter cell metabolism or what changes in cell metabolism occur in carcinoma. Real understanding of carcinoma and its etiology awaits the answer to these fundamental questions.

Q. *What is the rationale of ultraviolet radiation of the blood and what are the results in any adequately controlled series?*

A. Chiefly, irradiation of the blood is an attempt to utilize directly, rather than intermediately (and ineffectively) through the skin, the bacteriocidal and bacteriostatic actions of actinic rays. These actions are produced predominately at wavelengths of 2,500 to 3,000 Angström units, whereas penetration through the skin to the subcutaneous layer is absent at these wavelengths and only 1 per cent effective with non-bacteriocidal rays of 4,000

CALENDAR OF MEETINGS

July 1	Committee on Industrial Medicine
July 6	Joint meeting of Committees on Industrial Medicine and Compensation Insurance
	Washington Federation for Public Health Education and Research
July 8	Committee on Arrangements, Annual Scientific Assembly
July 12	Committee on Medical Care in Public Institutions
July 13	Washington Federation for Public Health Education and Research
July 14	Special Committee on Traffic
July 15	Committee on Special Exhibits, A.S.A.
July 16	Committee on Scientific Exhibits, A.S.A.
July 23	Program Committee
July 26	Executive Board
	Board of Censors
July 27	Grievance Committee
July 28	Special Committee on Traffic
July 29	Program Committee

Angström units (BACHEM, A., AND REED, C. I.: Penetration of light through human skin. Am. J. Physiol., 1931, **97**, 86.)

The photochemical effects of topically applied ultraviolet are well known to physicians (photosensitization, antirachitic action, erythema, etc.). Not so well known but nonetheless definitely established biologic effects ensue from topical applications: (1) destruction of ACCESSIBLE (i.e., surface) bacteria (as in decubitus and varicose ulcers, nursery or operating-room air), (2) growth restriction of tissue cultures, (3) albumen coagulation, and (4) others. Theoretically at least, it would be desirable in some pathologic states to apply these effects directly to the circulating blood. Thus, in fact, hemo-irradiation was first used in artifically induced septicemia in dogs.

Able investigators, including Noguchi, have reported favorably upon the detoxifying action of irradiation when applied directly to certain organic poisons such as snake venoms, saponins, toxic plant proteins, bacterial and virus toxins. Detoxification, too, could be a desired effect in the blood stream in some diseases.

Undoubtedly, some consideration should be given also to the foreign protein reaction from auto-transfusion per se.

Results. Most qualified observers agree that, to date, there is no adequately controlled clinical work on ultraviolet irradiation of the blood. It is unfortunate that the clinical reports on some fairly large series of cases did not follow the "non-selection" technic of alternate or simultaneous case evaluation which is the common practice in clinical appraisal. This does not mean that the method should be abandoned, but only that widespread therapeutic employment should be delayed until a more scientific basis is properly established by controlled laboratory and clinical reporting.

Despite the lack of controls, clinical (and most experimental) work seems to indicate a favorable effect in acute pyogenic infections, with resolution occurring in a distinct cause-and-effect sequence. On the other hand, it is observed that the alleged results in bronchial asthma not only were uncontrolled but the cases were subjected only to a very superficial individual evaluation concerning arrest of symptoms and signs. Conservatism should be exercised in accepting claims in diseases other than the pyogenic infections.

Experimental results, although occasionally unfavorable, largely indicate that hemo-irradiation, like topical irradiation, exhibits properties of action which may encourage its clinical use and trial.

The method is alleged to have been harmlessly applied in over 17,000 instances.

Q. *Exactly what is meant by bronchial spasm? How can the so-called bronchial spasm under anesthesia be differentiated from laryngeal spasm? Please give source of information.*

E. B. MACON, M.D.

A. It is easier to describe bronchial spasm clinically than pathologically. It probably exists mainly in the bronchioles and is not only muscular narrowing of the lumen in the smallest air passages but is associated with the outpouring of obstructing secretions. The obstruction is largely expiratory and is aggravated by effort. It may easily be differentiated from laryngeal spasm during anesthesia by the fact that in the former inflations are usually not difficult, there are expiratory whistling wheezes over the lung parenchyma and there is obvious expiratory effort without phonation. In laryngeal spasm the cords are strongly adducted and offer obstruction to inflations, there is high pitched phonation for any gas exchange through the larynx and effort is most pronounced on inspiration. Although instrumentation at this stage is often objectionable, laryngoscopy with intubation of the trachea will clinch the diagnosis.

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"LET US HELP THE PRACTICAL NURSES AND OURSELVES"*

James A. Gannon, M.D., F.A.C.S.
Washington

Several years ago, I was invited to attend a meeting of a new organization known as the Undergraduate and Practical Nurses' Association of the District of Columbia. I attended and learned some facts which aroused my interest and sympathy. I learned that there were an estimated 1,300 practical nurses working in Washington and that none of them was licensed, registered, or otherwise regulated. I learned that some commercial registries regularly charged 10 per cent of the future earnings of the nurses as payment for sending them on cases. Some of these registries made no effort to investigate applicants as to their technical knowledge or their moral characters. The patient who patronized one of these registries had then about an equal chance of obtaining an efficient, satisfactory, practical nurse or an ignorant, unsatisfactory one.

About one hundred courageous practical nurses formed an organization and obtained a charter in an effort to improve and give dignity to the occupation of practical nursing and a bill had been prepared for submission to Congress which provided for registration, license, and regulation of the workers. (More about this bill later.) When it became known that this organization had been formed, many registries notified the practical nurses on their lists that they would be boycotted and deprived of opportunity to work if they should join the organization. In order to offer members value and interest for their dues, the Association undertook to have a refresher course given each year. For two years this was conducted by a registered nurse. The third year no nurse could be found to continue the course, so I volunteered and gave a lecture a week for 13 weeks. Last year I organized a group of 20 District Medical Society members who agreed to give one or more lectures on their specialty, and beginning last September, and to continue until June, one lecture a week has been delivered to an interested group at the Franklin School Building.

The bill prepared for Congress had to meet the requirements of the Graduate Nurses' Association, the Corporation Counsel, and the District Commissioners. After three years it still has not been presented because sufficient public sentiment has not been aroused to impress the Commissioners of its need. It is hoped that Citizens' Associations throughout the District will show their interest and desire for licensing, registering, and regulating practical nurses. The Graduate Nurses' Association has been interested and helpful to a degree, but up to this time not sufficiently effective.

The practical nurse has arrived. She is a reality. She occupies a distinct position in the community, and the community owes it to itself to see that she is competent and satisfactory. After the acute stage of illness has passed, and the skill and knowledge possessed by the graduate nurse is no longer required someone must take over and care for the convalescent patient. Patients who are old or chronically ill, surgical patients who require long rest, young mothers who return from the hospital and need assistance in the care of the new baby, patients with mild mental derangement, all require care, but most people cannot pay the fees required by the graduate nurse. Furthermore, the routine of bed baths, preparation of meals, and other duties of this kind are not interesting to the graduate nurse. Many persons live in cramped quarters, and domestic servants are a rarity. The practical nurse will do the marketing, cook the food, keep the rooms clean, and run the house where she is employed. The graduate nurse cannot be called upon to do all this. The practical nurse, therefore, is a necessity.

Not many years ago the doctor's time was occupied by many duties he now delegates to others. The technician and the office nurse now do most of the mechanical time-consuming duties which used to occupy the doctor. He is now free to devote his energies to the care of his patients. Why could not some such arrangement be made by the graduate nurse? Why not have it understood that her duties shall be confined to serious, acute illness and, when her higher skill is no longer required, that she be succeeded by a competent practical nurse?

Since efforts were commenced to pass a bill in Congress to license practical nurses, a number of schools for practical nurses have come into existence.

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* Read before the Progressive Citizens' Association in the Parish Hall of Christ Episcopal Church, April 5, 1948.

Some of them are excellent, some are not. It seems unwise to try to teach practical nursing without giving the students an opportunity to actually assist in the nursing of patients. Yet a number of schools are charging high fees for a course of lectures which is not supplemented by practical experience. It is also unwise to fail to require at least a fair educational background for this important occupation. Many schools have no educational requirements for enrollment. The Doctors Hospital conducts an excellent course for the training of practical nurses, and its example should be followed by all the other hospitals. In the Public School System fine courses in both the white and the colored vocational schools are offered to students of practical nursing. These schools have affiliations with Gallinger, Episcopal, and Casualty Hospitals, where the pupils receive practical training after didactic teaching. It is not too much to require that candidates for these training schools complete the first two years of high school.

I have suggested that all nurses' training schools accept candidates for practical nursing and arrange their courses so that there will be no conflict with the training of graduate nurses. Our experience during the last War with the Red Cross nurses' aides who assisted in the hospital after a short intensive course of lectures has convinced me that an intelligent student can be trained as a satisfactory practical nurse in one year.

If a law is enacted to license practical nurses, the workers in this field at the time of enactment may be licensed without examination if they can furnish evidence that they are capable from two physicians and three patients whom they have nursed.

In order to enroll as a student "graduate nurse" today, the candidate must have completed high school in the top 25 per cent of her class. This requirement deprives many desirable pupils of the opportunity to follow a calling for which they are fitted by temperament and inclination. Many students who find trigonometry and calculus difficult would do well in the care of the sick if opportunity presented itself. What fine practical nurse material these students would make! Some of the nation's training schools require an A.B. degree from a college before a student may be admitted to training. The standards are high and the courses are thorough. More than half the time of the course in graduate nurse's training is spent away from the bedside and in the study hall, the laboratory, the lecture room, the dressing room, and the operating room. On graduation day the product of this education and good training is a person equally as well trained, as far as time and effort spent in preparation are concerned, as the lawyer or the engineer or other professional person. The financial reward for the practice of her profession as a bedside nurse is neither adequate nor appropriate to the preparation she has had. She cannot live and dress according to the standard she should maintain. There is no provision for vacation, for illness with pay, for social security. Her compensation does not equal that of a good stenographer's. She looks about and finds occupation in industry, in the Army, Navy or Public Health Service, in the veterans' hospitals, or in civilian hospitals as supervisor or training school executive. Many graduate nurses find that their general education fits them for more remunerative occupations unrelated to nursing, and they abandon their profession. Many of them realize that their training is a fine preparation for marriage and homemaking and they succumb to this opportunity.

I heartily agree that their education and preparation has been too good for them to spend their time doing routine and menial tasks for the bedside patients, and I am wondering what will be their fate when all the executive positions are occupied.

I say again that the practical nurse is here to stay, and the hospitals and the doctors and the public must see to it that they are properly trained for their duties, and that they are registered and licensed and regulated in order that those who need their attention may be safely and intelligently treated. I see no reason why the graduate nurse examining board should not conduct the required examinations and present the names of successful candidates to the Board of Medical Licensure for approval. I am assuming that future training for practical nurses will be done in the hospitals under the supervision of the graduate nurse instructors. They should be in a position to know the proper scope such examinations should encompass.

PHYSICIANS CONVENE IN CHICAGO FOR JUNE CONVENTIONS

Among some 12,000 physicians who registered for the 97th Annual Session of the American Medical Association in Chicago, June 21–25, and who also attended meetings of other scientific organizations which met concurrently, were about 85 members of the District Medical Society. Drs. C. B. Conklin and Herbert P. Ramsey were the Society's official delegates to the AMA's House of Delegates. Also attending meetings of the House of Delegates were Theodore Wiprud, Secretary, and J. Richard Connelly, Assistant Secretary, of the Medical Society.

Dr. Ernest Edward Irons, of Chicago, Professor of Clinical Medicine at the University of Illinois, is the new President-elect of the AMA. He is Past President of the American College of Physicians and a member of the American Board of Internal Medicine, the Association of American Physicians, the American Association of Pathologists and Bacteriologists, and the American Society of Bacteriologists. Dr. Irons has been serving as Secretary of the Board of Trustees of the AMA.

The Inauguration Meeting for the incoming President of the AMA, Dr. R. L. Sensenich, of South Bend, Indiana, was held in the ballroom of the Hotel Stevens, June 22. It was called to order by the retiring President, Dr. Edward L. Bortz, of Philadelphia. Following his introduction and installation as President, Dr. Sensenich gave his Presidential Address.

Dr. Isaac Arthur Abt, Chicago pediatrician, received the 1948 Distinguished Service Medal, which is awarded annually for scientific advancement in the field of medicine. Dr. Abt was Professor of Diseases of Children at Northwestern University Medical School from 1909 to 1942, and has been Professor Emeritus since 1942. He is the author or editor of several books, including two volumes for general readers, and many scientific monographs.

At the first session of the House of Delegates, June 21, Dr. Olin West, former Secretary and General Manager of the AMA, was requested to come to the platform by the Speaker, Dr. R. W. Fouts, and was given an ovation by the members of the House.

Dr. Ramsey took a leading part in the activities of the House of Delegates. He was made Chairman of the Reference Committee for Rules and Order of Business. This committee issued reports to the House under its title, which included rules for conduct of balloting for national offices. He appeared before the Reference Committee on Miscellaneous Business to discuss resolutions pending before the House on medical schools and hospitals and the American Red Cross National Blood Program. Dr. Ramsey also met with the AMA's Special Committee on Liaison with the American Red Cross, to which committee he was appointed last March by the Board of Trustees of the AMA.

The Council on Medical Service called a conference at AMA Headquarters, June 19, to consider the development of relationships between the Associated Medical Care Plans, Inc. and the National Blue Cross Commission. Dr. Ramsey attended this meeting at the request of President Holden and participated in the discussion. On June 25 he attended the meeting of the National Federation of Obstetrical and Gynecological Societies as delegate from the Washington Gynecological Society, and was elected Vice President of the Federation.

Six members of the District Medical Society contributed scientific papers which were read at sectional meetings. Drs. Garnet W. Ault and Irving B. Brick appeared on the program of the Section on Gastroenterology and Proctology. Dr. Ault's paper was entitled "The Surgical Treatment of Ulcerative Colitis," and Dr. Brick's, "Incidence of Hiatus Hernia and Associated Lesions Diagnosed by Roentgen Ray." Other papers presented were: "Empyema," Dr. Brian B. Blades, before the Section on Surgery, General and Abdominal; "Inhalation of Nebulized Aerosols in Office Practice," Dr. David Davis, before the Section on Laryngology, Otology and Rhinology; "The Specific Therapy of Bacterial Infections of the Central Nervous System," Dr. Harry F. Dowling, before the Section on Nervous and Mental Diseases; and "Psychiatric Aspects of Physical Medicine," Dr. Winfred Overholser, before the Session on Physical Medicine.

Among local physicians who led in the discussion of papers were Drs. Blades, Conklin, Dowling, Robert J. Coffey, Peter D. Comanduras, John E. Cassidy, Murray M. Copeland, James P. Leake and Edward B. Tuohy.

The District Medical Society and the local medical schools were also well represented in the Scientific Exhibit. On display were the following exhibits: "Impaired Venous Circulation," Drs. J. Ross Veal, Hugh H. Hussey and John Shadid, of Georgetown University School of Medicine; "Treatment of Abscess of the Lung," Dr. Roy G. Klepser, also of Georgetown; and "Parenteral Proteins in Surgery," Dr. Jacob J. Weinstein, of George Washington University School of Medicine. A Special Exhibit on Physical Medicine was presented for the third time under the auspices of Dr. Frank H. Krusen, Rochester, Minn., Chairman; Dr. Winfred Overholser, Washington, D. C., and Dr. Howard A. Rusk, New York.

Mr. Connelly discussed the functioning of the Society's MEDICAL BUREAU as a good-will instrument before the Grass Roots Conference, at the Palmer House, June 20.

Among the social functions attended by a number of Washington physicians was the joint luncheon meeting, June 23, arranged by the George Washington University General Alumni Association and the George Washington University Medical Society, held at the Ambassador East Hotel. Dr. Ramsey spoke for the Medical School and conveyed greetings from Dean Walter A. Bloedorn; Dr. Oscar B. Hunter addressed the meeting as Secretary-Treasurer of the Society. Dr. James I. Boyd, President of the Society, presided.

At a meeting of the Board of Governors of the American College of Pathologists, held at the Palmer House, Dr. Hunter discussed the American Red Cross Blood Bank as it functions in Washington, which he said has been satisfactory. Dr. Hunter presented his Secretary's report to the American Therapeutic Society, which held its 49th annual meeting, June 20 and 21, at the Stevens Hotel.

The American College of Chest Physicians held its 14th annual meeting at the Congress Hotel, June 17–20. Dr. J. Winthrop Peabody presided at a round table luncheon, June 20, on Rest and Early Ambulation. Dr. Francis J. Weber was moderator at a Symposium on BCG Vaccination, June 19.

Dr. John A. Reed was elected a member of the Council of the American Diabetes Association, which met June 20 at the Sheraton Hotel, and will serve for a period of three years.

Dr. S. Ross Taggart, Director of the Bureau of Venereal Disease in the District Health Department, presented two papers on June 21 before the American Association of Venereal Diseases. His papers dealt with the treatment of venereal disease with streptomycin.

The American Blood Irradiation Society met at the Stevens Hotel, June 19 and 20. Dr. G. J. P. Barger, Secretary-Treasurer of the Society, presented a paper on "Fundamentals of Blood Irradiation," June 19. He was also toastmaster at a banquet the same evening.

MEMBERSHIP

The following applicants for membership were duly elected to membership at the meeting of the Executive Board, May 31, 1948, in accord with Amendment XI, Section 2, of the Constitution and By-laws of this Society.

Active Members

Herbert Gibbs Brandes, 135 Rhode Island Avenue, S.E.
Michael Lester Buckley, 4511 Avondale Street, Bethesda, Md.
John Peter D'Angelo, 3915 Edmunds Street, N.W.
John Bernard Fegan, 2210 Nichols Avenue, S.E.
Charles F. Finley, 2210 Nichols Avenue, S.E.
Bernard A. Fitzgerald, 1221 Oates Street, N.E.
Jack Kleh, 6523 Clarendon Road, Bethesda, Md.
Laurence H. Kyle, Georgetown University Hospital
Earl Hick Mitchell, Jr., 1801 Columbia Road, N.W.
James M. Moser, Jr., 3751 Jenifer Street, N.W.
Arthur B. Rosenbaum, 1328 Eye Street, N.W.
William W. Stanbro, George Washington University Hospital
Leon Yochelson, St. Elizabeths Hospital
Hyman Joseph Zimmerman, Gallinger Municipal Hospital

Associate Members

Robert Norwood Coale, 921 Sligo Creek Parkway, Takoma Park, Md.
Joseph James Kaveney, 1332 Massachusetts Avenue, N.W.
Sterling Garrett Mead, D.D.S., 1149 16th Street, N.W.
Harold Taylor Yates, 3423 Martha Custis Drive, Alexandria, Va.

The following applicants for membership were duly elected to membership at the meeting of the Executive Board, June 28, 1948, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

Active Members

Hugh G. Clark, 2865 South Buchanan Street, Fairlington, Va.
Peter D. Comanduras, 4427 South Four Mile Run Drive, Arlington, Va.
George W. Hoover, Jr., 6507 Fairfax Road, Bethesda, Md.
Marcel Paul Houle, Sibley Memorial Hospital
Morris Irwin Michael, 5721 4th Street, N.W.

(*Continued on page 480*)

News and Personals

The American Hospital Association will hold its Fiftieth Anniversary Convention in Atlantic City, N. J., September 20–23, with headquarters at the Traymore Hotel.

The prevention of accidents to children is the objective of an intensive campaign to be launched this fall by the **Metropolitan Life Insurance Company.** This program will be conducted in coöperation with the Children's Bureau of the Federal Security Agency, the American Academy of Pediatrics, and the National Safety Council.

As the Metropolitan points out, partly because of the remarkable improvement in communicable disease mortality, accidents now constitute the leading cause of death in children from 1 to 15 years of age. A special packet of material on child safety, including recent statistical studies and a new illustrated booklet for the public, will be offered to physicians locally throughout the country by the Company's field representatives. Physicians may secure copies of the booklet for distribution to their patients.

George Washington University Hospital opened a new **Pulmonary Disease Clinic,** July 2, established with the aid of a grant from the District of Columbia Tuberculosis Association. The grant consists of $8,500 a year for a three-year period. Mrs. C. D. Lowe, President of the Association, presented the first year's grant to Dr. Walter A. Bloedorn, Dean of the School of Medicine, during brief ceremonies in his office, June 29.

The new Clinic, according to Dr. Bloedorn, "will make available to indigent patients the only complete chest service in the Washington area." The services will include management of tuberculosis patients who are not bedridden, maintenance of collapsed lungs, bronchoscopy, all modern X-ray procedures, and all other services necessary to either establish a diagnosis or treat effectively diseases of the chest.

Most of the patients receiving treatment will be referred by private physicians and the District Health Department. The Clinic will be open on Mondays and Fridays; patients will be seen by appointment only.

Dr. Jason Geiger, a graduate of the School of Medicine in 1945, has been named resident fellow at the Clinic. Dr. Brian B. Blades and other members of the Department of Surgery will give consultative service. The Clinic will be under the administration of the Outpatient Department, which is headed by Dr. Clarence Hartman.

In addition to contributing funds for the support of the Clinic, the Tuberculosis Association is contributing the professional advice of its research department.

A Health Emergency Planning unit in the Public Health Service has been established. Dr. Norvin C. Kiefer, Senior Surgeon, will direct the unit, which will coöperate with national planning boards, as well as professional and voluntary organizations, to plan a coördinated program for safeguarding public health during a national emergency. Existing facilities within the Public Health Service will be surveyed in order that those with significance during a national emergency can be readily integrated with civil defense plans. The unit will also draw plans for more comprehensive public health catastrophe services to be offered in response to peacetime emergency requests from states.

At the meeting of the **Executive Board,** June 28, **Dr. Frederick C. Fishback** was designated the Society's representative to the **Washington Federation for Public Health Education and Research,** and **Theodore Wiprud** was requested to act in an advisory capacity. The purpose of the Federation, which is being organized by Dr. Charles F. Morgan, Professor of Physiology of Georgetown University, is to bring together members of important scientific groups of this area into one unit to advance medical research and public understanding thereof.

The George Washington University Hospital has received a grant of $1,000 from the Marcelle Fleischmann Foundation, Inc. of Baltimore, for the hospitalizing of patients suffering from intractable asthma. Persons who are in need of surgical treatment for intractable asthma and who wish to take advantage of the treatment afforded by the Fleischmann grant may apply to the George Washington University Hospital, Department of Surgery.

Interns of **Gallinger Municipal Hospital** will again be assigned to accompany the District Health Department's two emergency ambulances, a practice which was suspended during the War because of medical manpower shortages. During the War and until the present, ambulances went out with two drivers trained in first aid.

The first meeting of the **World Health Assembly** was held in Geneva, June 24. Dr. Thomas Parran, former Surgeon General of the USPHS, was Chairman of the United States delegation. Dr. Martha Eliot, of the Children's Bureau, Dr. James R. Miller, trustee of the American Medical Association, and Dr. Parran were the three United States delegates. There were also five alternate delegates and thirteen advisers, making a total representation of twenty-one persons from this country.

Dr. A. Clagett Gray, Chairman of the Medical Society's Committee on Emergency Medical Care, and **Theodore Wiprud,** Secretary of the Society, attended the Regional Meeting on Disaster Preparedness which convened in Philadelphia, June 8, at the request of Dr. Gilson Colby Engel, President-elect of the Pennsylvania State Medical Society.

Dr. Paul F. Dickens was in Philadelphia during the week of July 12, where he served as Medical Adviser to the Democratic National Convention. Dr. John F. McCloskey, Chief Medical Adviser for the Convention, made the appointment at the suggestion of Senator J. Howard McGrath, Chairman of the Democratic National Committee.

Dr. Reginald Spencer Lourie, New York child psychiatrist, joined the staff of **Children's Hospital,** July 1, to head the new Psychiatric Department, which began operation the first of August. The new department is being financed by a $20,000 grant from the Junior League of Washington.

Dr. Lourie is a graduate of Long Island College and Columbia University. He interned and served as Assistant Pediatrician at Long Island Hospital, as a resident psychiatrist at the New York State Psychiatric Institute and Hospital, as a research fellow in psychiatry at Bellevue Hospital in New York, as assistant pediatrician in the Vanderbilt Clinic in New York, as research associate psychiatrist at Columbia, and recently as a member of the pediatric-psychiatric clinic staff of the University of Rochester. During the War Dr. Lourie was a Lieutenant Commander in the Navy Medical Corps.

Another appointment of interest at Children's Hospital is the new Assistant Director, **John D. Martin,** who fills the vacancy created by the recent resignation of John J. Anderson, now Administrator of Arlington Hospital. Mr. Martin is a graduate of Yale University and studied hospital administration at Columbia University.

Dr. Walter Freeman spoke on "Anatomy of the Frontal Lobes in Relation to Frontal Lobotomy" before the **International Conference on Psychosurgery** in Lisbon, Portugal, August 3–7. He also presented a scientific exhibit on (a) transorbital lobotomy, and (b) gross anatomy, pathology and roentgenography of frontal lobotomy.

Dr. Freeman and a committee of surgeons and neurologists were instrumental in organizing the Conference, which brought together experts in surgery and neurology from the principal countries of Europe and North and South America, principally to discuss prefrontal lobotomy. The conference was dedicated to Dr. Egaz Moniz, of Portugal, who introduced the brain operation in 1933. Dr. James W. Watts also attended the Conference and contributed a paper.

The Nursing Staff of George Washington University Hospital held a **Poliomyelitis Institute,** July 12–16, in order to become acquainted with recent trends in complete care of patients with poliomyelitis. Members of the District Medical Society who acted as participating consultants were Drs. P. A. McLendon, Leonard T. Peterson, Monroe J. Romansky and Charles S. Wise.

Dr. Jay McLean has opened an office in the Columbia Medical Building at 1835 Eye Street, N.W., for the diagnosis and surgery of breast tumors.

Dr. Irving B. Brick, Instructor in Medicine at Georgetown University, has just been announced the winner of the eighth Annual Essay Contest of the Mississippi Valley Medical Society "for the best unpublished essay on a subject of practical and applicable value to the general practitioner of medicine." He will present his paper on "Clinical Significance of Hiatus Hernia" before the 13th Annual Meeting of the Mississippi Valley Medical Society, to be held at the Abraham Lincoln Hotel, Springfield, Ill., September 29, 30 and October 1, and will receive a cash award, a gold medal and a certificate. His paper will also appear in the January 1949 issue of the *Mississippi Valley Medical Journal.*

Dr. Samuel M. Becker will give the principal address at a meeting sponsored by the Monmouth County (New Jersey) Medical Society, October 27, in conjunction with the Monmouth County Bar Association. His subject will be "Forensic Medicine, the Doctor in Court." Dr. Becker gave this talk before the Jacobi Medical Society at its annual banquet, December 15, 1947, and has spoken on the same subject before the staffs of Garfield and Sibley Hospitals.

Dr. Lester I. Fox accepted an appointment as Resident in Allergy at the Medical College of Virginia Hospital, Richmond, and began his new duties, July 1. Dr. Fox recently completed his appointment as Senior Resident in Internal Medicine at the Veterans Administration Hospital in Richmond.

Dr. Samuel M. Dodek contributed the chapter on Prenatal Care in the book for laymen, "Every Woman's Standard Medical Guide," recently published by the Greystone Press of New York.

Theodore Wiprud is serving as a member of the Chest Agency Research Committee of the Interim Committee of the United Community Services of Washington.

Dr. C. Willard Camalier and Dr. Daniel Lynch, Associate members of the Medical Society, were among those who witnessed the signing of the Dental Research Bill by President Truman in June. The bill, which authorized the Public Health Service to coördinate research on the teeth and gums, was sponsored by Congressman Walter E. Brehm of Ohio.

Dr. James P. Leake assisted in a panel discussion on Public Health Aspects of Epidemic Poliomyelitis at the First International Poliomyelitis Conference, which was held in New York, July 12–17. Among the three speakers who presented the topic was Dr. C. W. Munger, Director of St. Luke's Hospital, New York, who assisted in the recent hospital survey in the District of Columbia.

BOOK REVIEWS

A Manual of Clinical Therapeutics—A Guide for Students and Practitioners, 2nd. ed. WINDSOR C. CUTTING, M.D., Professor of Therapeutics, Stanford University School of Medicine, San Francisco, California. Price, $5.00. Pp. 712, with 30 illustrations. Philadelphia: Saunders, 1948.

Dr. Cutting's "Manual of Clinical Therapeutics" is serving well the purpose for which it was planned. In a condensed form, it presents the essential pathologic facts of the various diseases, and in a brief but rather clear form, the therapeutic measures, which include all modalities from drugs and diets to surgery and physical medicine.

The chapters on poisonings, drugs, doses, and prescriptions are well written and very useful, especially in a pocket-sized edition. The chapter on dietetics with complete diet lists is excellent and so are the two chapters handling general problems in therapy.

There is a chapter on Neuro-Psychiatry, making the clinical information a well rounded one. In the appendices one can find a list of medical abbreviations, a complete list of clinical physiologic data, suggestions for arranging a physician's handbag and surgical kit, and methods of removing stains, which are all very practical.

Some antiquated words like "physio-therapy" (physical medicine) should be corrected in the next edition. This book certainly will be a useful guide for students and practitioners.

FRANK S. HORVATH, M.D.

Sexual Behavior in the Human Male. Alfred C. Kinsey, Professor of Zoology, Indiana University; Wardell B. Pomeroy, Research Associate, Indiana University; and Clyde E. Martin, Research Associate, Indiana University. Price, $6.50. Pp. 804, with 173 charts and 159 tables. Philadelphia: Saunders, 1948.

So much has been said and written about the now famous "Kinsey Report" in the lay press that its full medical usefulness is in serious danger of being lost in a profusion of public acclaim. Any book which zooms to best-seller status and precipitates a rash of compendia and guides by experts is almost sure to be medically suspect. One cannot help but wonder at the fate of such respectable classics as Harvey's "De Motu Cordis" or Darwin's "Origin of Species" had they been launched in such a sea of ballyhoo.

Careful study of this 804-page volume, however, reveals a sober, scholarly, highly informative, and challenging report on the sexual behavior of the American male. It represents nine years of tenacious effort by Dr. Kinsey and his associates, sometimes against innumerable odds, to collect, study and report data gathered from over 12,000 persons, 5,300 of whom were used in the present volume. The study was supported by the National Research Council Committee for Research on the Problems of Sex, with funds contributed by the Medical Division of the Rockefeller Foundation.

It is probably safe to say that the proper study of human sexual behavior has until now eluded the grasp of the dispassionately objective scientific observer. Dr. Kinsey is just such an observer. Although his work has the deepest implications for medicine, psychiatry, anthropology, sociology, religion and law (to mention only a few), he writes this book solely from the viewpoint of a biologist—and especially that of a taxonomist. "The taxonomist," writes Dr. Kinsey, "is primarily concerned with the measurement of variation in series of individuals which stand as representatives of the species in which he is interested." Herein lies both the great strength and the great weakness of this work. Orgasms, as an index of sexual activity, are counted, added, averaged and discussed as dispassionately as if Dr. Kinsey were working with his now famous gall wasps. Deliberately absent are all references to anxiety, love, and the other emotional accompaniments of sexual activity. This, Dr. Kinsey protests, is not his province. Yet, if his work is to serve as a source book for social or legislative reform, the data are incomplete if removed from the emotional settings in which they occur.

Dr. Kinsey has taken the greatest pains to insure the scientific accuracy of his results. He has tested, cross-tested, checked and double-checked. His charts, graphs and tables, of which there are many, have all been derived from statistically valid samples and subjected to rigid mathematical analyses. Although he and his co-workers have interviewed persons who range in background from college professor to pimp, from gambler to psychiatrist, and have conducted these interviews in every state of the Union, the sample is still loaded in favor of the urban dweller, the college group, and the inactive church-goers. Dr. Kinsey and his associates are aware of this defect and are constantly working to make their sample as representative as possible.

The first four chapters, comprising Part I and consisting of "Historical Introduction," "Interviewing," "Statistical Problems," and "Validity of Data," are among the most important in the entire book and may well serve as a model for all future research in this and related fields. Knowing how difficult it is to obtain reliable data relating to sexual behavior from emotionally disturbed patients, this reviewer was particularly interested in his interviewing technic. After taking considerable pains to establish good rapport with the voluntary subject, anywhere from 300 to 521 items are covered in a rapid-fire manner, lasting approximately two hours. Notes are made in a special code, known only to the key man in the project, and elaborate precautions are taken to preserve confidences. Dr. Kinsey places considerable emphasis on looking the subject "squarely in the eye," apparently to insure honesty of response. In this and many other more important ways, his technic departs from the usual psychiatric interview. As every physician knows, sexual data, which are dependent on the individual's memory, are notoriously subject to convenient exaggerations or equally convenient amnesias. It must also be remembered that the data were derived only from subjects who were willing to talk about their sexual experiences. This fact in itself influences the results of the sample. Although he obtained almost 100 per cent participation in certain groups, such as college classes, the statistical results must be understood in the light of this limitation.

Dr. Kinsey's yardstick for measuring sexual activity is the orgasm, and in Part II he goes into considerable detail to define precisely what he means by the term. He then analyzes in great detail the factors influencing sexual outlet, such as age, age on reaching adolescence, marital status, educational and social level, rural or urban background, and the depth and character of religious training. It will come as a surprise to most readers that the height of the sex drive in the male occurs between the ages of 16 and 20. Dr. Kinsey supports this statement with numerous findings, including the fact that 70 per cent of American youth in this age group experienced premarital intercourse. Dr. Kinsey divides his subjects into three groups, corresponding roughly to the grade school, high school, and college levels. He finds that the sexual patterns, as measured by premarital intercourse, extramarital infidelities, speed of orgasm, attitude toward nudity, etc., are almost specific for each group. Masturbation, for example, has its highest frequency in the college group where marriages occur late, and its lowest in the lower level group where marriages tend to occur early in life.

In Part III, Dr. Kinsey discusses the six sources of sexual outlet: (1) masturbation; (2) nocturnal emissions; (3) heterosexual petting; (4) intercourse (premarital, marital, extramarital, and intercourse with prostitutes); (5) homosexual outlets; and (6) animal contacts. In the course of these pages, the experienced physician will find many facts and figures which will either corroborate or astound. The fact that only 90 per cent of American males masturbate at one time or another may seem too low a figure to some. The fact that 37 per cent of American males have had at least one homosexual relationship, culminating in orgasm, at least once in their lives, may seem unbelievable to others. The incidence of so-called "perverse" behavior, such as mouth-genital contacts, in the general population is such as to give the sage physician pause before passing judgment on what is or what is not "normal" in our culture.

This work is unquestionably one of the most provocative studies of modern times. Although this study was aided by numerous coöperating medical groups and should have its greatest usefulness to physicians, the medical profession does not emerge unscathed. In the beginning months of the survey, the most formidable opposition came from "a particular medical group," and in one city the medical society brought suit on the ground that Dr. Kinsey and his associates were practicing medicine without a license. In almost all instances, the objections from so-called scientific groups were on moral bases rather than on objective grounds. Fear has been expressed as to the possible deleterious effect of this book on susceptible youth. It is doubtful if prurient teen-agers will wade through such a scholarly and formidable tome; and, if they do, the data acquired will assuredly be more reliable and less injurious than the moralistic preachments gleaned by surreptitious glances through the forbidden pages of the Family Doctor Book of a generation ago.

This is a book for every physician to have and to study. It should be required reading for any physician who deals or hopes to deal with problems related to sexual behavior. It is written clearly and dispassionately in a simple style and with an occasional human touch of humor. It verifies in statistical (and for this reason, more acceptable) form what the psychiatrist learns from long and patient study of the individual case, namely, that there is great and infinite variety in human behavior and that to be therapeutic, one must first be tolerant. The medical profession will await with great interest the companion volume, "Sexual Behavior in the Human Female," soon to be published.

Z. M. Lebensohn, M.D.

You and Your Doctor: A Frank Discussion of Group Medical Practice and Other Modern Trends in American Medicine. Benjamin F. Miller, M.D., Clinical Professor of Medicine, George Washington Medical School; Research Associate in Medicine, National Research Council; formerly associated with the University of Chicago Clinics and the United States Public Health Service. Price, $2.75. Pp. 183. New York: McGraw-Hill, 1948.

The avowed purpose of this little volume is "to create a better understanding of the many problems, old and new, that face [the medical] profession." Unfortunately, the author, who is a physician, has not dealt with them in an objective manner. Nevertheless, physicians will approve many of his views and the readable and interesting manner in which they are presented.

The inadequacy of the general practioner is dwelt upon at length. No one denies that, in the light of medical progress, he, like the specialist, requires better training. That he is not competent to care for the needs of most patients who come to him will be challenged not only by general practitioners but by fair-minded specialists. Most general practitioners do not now engage in professional work for which they are not qualified. They refer to specialists those patients who require their attention.

The author makes it quite clear that he has little sympathy with the point of view of a majority of the medical profession. This is undoubtedly the reason for this book. Step by step he leads up to his final conclusion that the solution for the maldistribution and the inferior quality of medical care lies in the adoption of a Government system of compulsory sickness insurance.

There is a real need for an unbiased appraisal of the medical care situation in a book for lay consumption. Such a book would direct attention to unmet medical needs, giving adequate and unprejudiced recognition to the various solutions proposed. This book leaves much to be desired in this regard.

Peripheral Pathways in Causalgic State—Threadgill

(*Continued from page 440*)

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Mammary Tumors—Geschickter and Burka

(*Continued from page 448*)

inspection, transillumination, and palpation. To supplement these, roentgenograms may be taken and a biopsy performed.

Varieties of breast tumors have been enumerated and the clinical characteristics described. It is believed that no definite nodule in the breast should be treated without microscopic evidence which will establish its benign or malignant nature, and for this reason, surgical biopsy, with or without the use of cauterization, is indicated for a definite palpable mass.

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Washington Physicians of Yesterday—Prentiss

(*Continued from page 458*)

1878–80. A notable achievement, which redounded to the honor of the Medical Society, and had great influence in the establishment of the filtration system for the purification of the water supply for Washington, was the report of its committee in 1894 on that subject; of this committee Dr. Prentiss was a member. He was a delegate to the International Medical Congress at Copenhagen 1884, and at Berlin 1890; and he served as delegate to the United States Pharmacopoeia Conventions of 1880 and 1890. He was a member of the Cosmos Club 1880–99; and he was memorialized in "Who's Who in America."

Dr. Prentiss was a prolific contributor to periodical medical literature; and he delivered many lectures under various auspices, especially that of the United States National Museum. In his youth he was fond of hunting, which developed in him an interest in ornithology; through this he became joint author with Elliott Coues of "Avifauna Columbiana," a profusely illustrated work of 133 pages on the bird life of the District of Columbia, published in 1883.

During the latter years of his life Dr. Prentiss suffered greatly from chronic debilitating illness, with periods of complete incapacitation. However, he managed to continue his professional and teaching activities and his incumbency of the presidency of the Medical Association to the very last. At the conclusion of one of his lectures he was seized with an acute attack which caused his death ten days later, on November 19, 1899, at the *fin de siècle.*

Dr. Prentiss was of the thoughtful and serious type; scholarly, scientific, thorough, exact, laborious. He stood high in scientific circles, as well as in the esteem and friendship of his professional confreres. His practice was as active as he chose to make it. Two of his sons became physicians in Washington: the late Dr. Elliott Coues Prentiss (1877–1936), and Dr. Daniel Webster Prentiss, Jr., who has maintained and carried on the professional aptitude innate in the family.

John B. Nichols, M.D.

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CRANIOPLASTY: A TECHNIC WITH TANTALUM*

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CRANIOPLASTY has received renewed consideration during the past 5 years not only because of the Second World War which has created an increased demand but because newer methods have stimulated hopes for greater success. The interest in cranioplasty has always been greater among patients than among surgeons. Everyone who has suffered with a cranial defect over a period of a few years will give a history of repeatedly seeking a repair. This former indifference of the surgeon has been due to the absence of any uniformly successful method of repair at his command, to his failure to focus attention on the protective osseous covering of the brain, and to his inclination to ignore the symptoms resulting from the altered physiology. It is wise to regard nature as having a purpose for enclosing the brain securely and having it surrounded by fluid. Patients who have cranial defects exhibit symptoms that comply with a definite pattern.

Efforts at craniotomy and cranioplasty probably antedate the records of civilization. According to Woolf and Walker[1] the use of precious metals for this purpose was practiced during the Middle Ages and often the charlatan was accused of slipping the valuable commodity into his pocket rather than into the skull of the afflicted. These authors also stated that primitive tribes of the South Sea Isles used the hull of the coconut for repairing the fresh skull defect created by trephining.

Grant and Norcross[2] contributed their classical article on the eve of renewed interest in the use of alloplastic materials. They made an exhaustive digest of world literature on cranioplasty. They recorded that the first efforts were made by J. van Meekren[3] in 1670 using the bone of a dog with apparent success although the tenets of the clergy required him to remove the bone later. Merrem[4] in 1810 experimented with dogs and Phillip von Walther[5] in 1821 did a cranioplasty on man. The development of aseptic surgical technic and Ollier's work[6] on heterogenous bone grafting constituted the background for renewed efforts.

During the 1870's attempts were made at cranial repair with osseous buttons and decalcified bone. In 1889 Seydel[7] used an osteoperiosteal graft from the tibia which he reduced to small pieces and placed in the defect. He packed the wound with iodoform gauze for the first few days, then removed the gauze and closed the scalp. The patient made a recovery and the defect remained closed. During this time various surgeons made use of heterogenous bone grafting for repairing cranial defects. In 1890 Mueller[8] used a flap of scalp, pericranium, and the outer table for this procedure. Koenig[9] advocated the use of twin flaps, one to cover the defect with the outer table of bone, the other consisting of scalp overlying the defect to cover the area of the transplant. In 1891 Hinterstoisser[10] used celluloid successfully; this was the first record of the use of alloplastic material during the modern surgical era. It has been used by many surgeons with reports of various degrees of success. In 1939 Ney[11] reported 300 cases of cranioplasties with celluloid resulting in only five infections. In four of these, he reoperated successfully after an interval of six months.

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* The Davidson Lecture, presented before the Society, October 22, 1947.

† Captain in the Medical Corps of the United States Naval Reserve.

From 1891 to 1903 no new methods were introduced. This period is represented by multiple reports of the Koenig-Mueller method, the use of tibial graft, the Senn method (use of decalcified bone), and the celluloid method, with praises and condemnations. In 1895 von Eiselsberg[12] reported on the several methods and recommended the procedure for epilepsy and tenderness about the defect.

Durante[13] or von Hacker[14] in 1903 did the first osteoperiosteal cranial graft. Von Hacker made a pericranial flap, chiseled off the outer table of bone under the flap, leaving it attached to the pedicle, and closed the defect by turning the flap over 180 degrees leaving the bone upward. He reported 2 cases. Bunge[15] of Garre's Clinic in 1903 reported the use of this method of repair without turning the flap. This osteoperiosteal method, with or without turning the flap, enjoyed great popularity. In 1907 Sohr[16] of Garre's Clinic reviewed their results of 7 cases and reported 1 case in which the pedicle had been severed and the periosteum of the graft had been sutured to that about the defect. This procedure later became the one of choice when the outer table of the cranium was used. Leotta[17] in 1909 transplanted skin and pericranium with spicules of bone attached so that the spicules overlay the defect. From 1909 to 1915 the osteoperiosteal grafts from the tibia became the most popular method of cranial repair. Delagénière[18] reported 104 cases with only 2 failures; 1 of these was reoperated upon successfully.

Morestin[19] introduced cartilage in 1915, Westermann[20] used sternum in 1916, and Villandre[21] reported the use of bone soup during the same year. Sicard, Dambrin and Roger[22, 23] in 1918 reported the use of treated cadaver skull containing multiple perforations. Kreider[24] in 1920 used autogenous bones removed from comminuted fractures of the skull which he had preserved by burying them subcutaneously in the abdomen. MacLennen[25] in 1920 used the scapula because it had periosteum on both sides. Pickerill[26] used the ilium in 1921. All these various methods developed followers.

Grant and Norcross[2] reported 89 operations on 83 patients performed between 1911 and 1938 using various methods of cranioplasty. They could secure adequate follow-ups on 58 patients whose defects had been repaired by osteoperiosteal cranial transplants. They cut the pedicle and sutured the periosteum of the graft to that surrounding the defect. There were only 3 failures. The most frequent symptom of these patients suffering with cranial defects was convulsive attacks which occurred in 27 individuals of whom 18 were cured by cranioplasty. An analysis of their results reveals that 7 of 8 patients were cured of cosmetic complaints, 2 of 2 patients were cured of pulsations, and 7 of 10 patients were relieved of headaches. Eleven had weakness and paralysis, of whom 6 were improved. The symptoms of visual disturbances and numbness were essentially unchanged. One of 3 patients suffering with mental changes was relieved.

These results indicate that the correction of abnormal physiologic processes caused by a cranial defect represented a very successful surgical procedure. The autogenous osseous method of repair required a long convalescence after the original injury and another long period after the operation before a patient could qualify for duty. Furthermore, X-ray examinations of the graft frequently revealed rarefication and evident low resistance to external force.

Celluloid for repairing cranial defects has had the longest use of all alloplastic materials. Aluminium was first used in 1893 by Booth and Curtis[27] and later by Elsberg[28] in 1908. Gerster[29] used a gold plate in 1895, and Estor[30] in 1916 reported 100 cases in which gold was used. There were 2 deaths, and the plates had to be removed in 2 cases because of infection. Cornioley[31] used a platinum plate in 1929. Lluesma-Uranga[32] used a silver wire mesh, and Boldrey[33] used a stainless steel wire mesh to cover cranial defects.

A second classical article on cranioplasty was contributed by Woolf and Walker[1] in 1945; they collected 401 references classified according to the plastic methods. They reported that ox horn, buffalo horn, ivory, hard rubber, gutta percha, plaster of paris, sheet mica, gum cork, calcium phosphate, and carbonate in olive oil have also been used.

Renewed interest in alloplastic material for repairing cranial defects was effected by the use of vitallium in 4 cases reported in 1941 by Geib.[34] Peyton and Hall[35] reported 1 case in 1941, and Beck[36] reported 4 cases in 1942. Campbell, Meirowsky and Tompkins[37] thought that ticonium would be a suitable material, but there have been no clinical reports of its use.

Fulcher[38] used tantalum on November 24, 1941 to repair a cranial defect at the suggestion of Captain F. R. Hook of the Naval Medical Corps. Pudenz[39] demonstrated that tantalum was well tolerated by tissues and that small bony defects would heal spontaneously when repaired with this element. Reeves[40] repaired 2 larger frontal defects in 1944. The plates were perforated and were secured by tantalum wire. Robertson[41] reported 26 cases of cranial defects repaired with tantalum. He used wire or small triangular tantalum wedges to immobilize the plate. The wounds of 5 of the patients were contaminated at the time of the operations, but they healed readily with the aid of chemotherapy. In November 1944 Gardner[42] reported the immediate repair of cranial defects with tantalum in 2 patients suffering with compound comminuted fractures. In each instance the incisions healed promptly. In July, 1944 Delarue, Linell and McKenzie[43] reported some experimental work to indicate that tantalum did cause some tissue reaction. These results are directly opposite to those of Pudenz and Odom[44] and to all clinical studies. Conley[45] used tantalum wire to secure the plate in a patient from whom he had excised a large osteoma. Hemberger, Whitcomb and Woodhall[46] used triangular trimmings of tantalum to secure the plate. They used a complicated method for prefabrication. Echols and Colclough[47] applied the plate as an onlay beneath the periosteum. Mayfield and Levitch[48] used tantalum wire to secure the plate in 20 cases but thought that screws would be more convenient. Harris and Woodhall[49] did a pedicle graft over a tantalum plate. Gardner[50] quoted Craig as observing that the brain pulsates in a trephined skull but does not in a closed one. He thought that a cranial defect permits the brain to be in a pathologic motility. He stated that epilepsy was more common after a penetrating brain wound. He reasoned that if the repair of a cranial defect was immediate some patients may never develop epilepsy or post-traumatic sequelae. Woodhall and Spurling[51] emphasized that cranial defects must be repaired for the patients to qualify for military service. They reported 79 cases with about half returning to duty. Mayfield and Levitch[48] emphasized the importance of perforations in the plate. They used a solid plate which had to be sacrificed when an infection developed; but in another case the perforated plate was saved after infection had developed by opening the wound and administering penicillin. Woolf and Walker[1] attempted to evaluate the different methods of cranioplasty in their classical article. They presented their experience with methyl metacrylate which requires prefabrication. It did appear to them to be inert, and it is penetrated by roentgen rays.

Bakody[52] reported 40 cases performed in the Navy. He recommended tantalum of 25 mils' thickness and illustrated the necessity of multiple perforations of the plate. In 1 patient he removed a solid plate from a wound that did not heal, made multiple perforations, and reinserted it. Subsequently, the wound promptly closed. He used only a wooden anvil and a ball peen hammer for effecting the desired contour of the plate. He recommended triangular trimmings of 25 mils' thickness to prevent buckling.

Voris[53] thought that a contaminated or an infected wound constituted a contraindication to cranioplasty. He advocated that multiple perforations be made in the plate and that some type of fixation be used.

In addition to the case reported I repaired a large cranial defect of a Marine on April 25, 1942. Since the tantalum available was inadequate to cover the defect, it was cut into strips and placed at intervals of 5 millimeters. These strips were simply placed beneath the periosteum and held in place by suturing the scalp. The wound healed kindly, but the ends of the strips produced a palpable elevation. It was not as satisfactory as forming a ledge. The patient had experienced great loss of brain tissue at the time of the injury which disqualified him for further naval duty.

During the summer of 1945 I performed 16 cranioplasties using tantalum. All cranial defects were repaired after the wounds had been completely healed for a period of 2 weeks. The wounds of 3 patients suffering with a large cranial defect did not heal adequately to permit surgery during this period. Chemotherapy with sulfadiazine and penicillin was used when indicated.

TECHNIC OF TANTALUM CRANIOPLASTY

The tantalum plate used for any defect larger than 3 by 3 cm. should be 25 mils thick. Such was not always accessible. Multiple perforations were made with a drill at intervals of 1 cm. On the preceding evening after the scalp had been shaved a piece of cardboard was placed over the defect and trimmed to its exact size. The cardboard was then placed on the metal plate which had been perforated and the tantalum was cut about 1 cm. larger. A homologous portion of the skull to that of the defect was selected, and the size of the defect was represented by a blue pencil mark. With a ball peen hammer and a concave wooden anvil the tantalum was beat to the correct contour, the homologous area being used as a model. Then at intervals of about 1.5 cm. along the border small triangular trimmings of tantalum were excised, thus permitting it to be more inverted. After this the plate was sterilized by a standard method. If the cranial defect involved the frontal bone to the extent that no homologous area existed, the depression was filled with dental plaster until the desired cosmetic contour was achieved, which was used as the model for prefabricating the plate.

The operation was performed under local anesthesia with 1 per cent procaine solution. The scars were excised and the cranial defect exposed. If there was an underlying foreign body the dura was incised and the fibrous tract representing its path of travel was followed by coring it from the brain tissue until it led to the object. No attempt was made to remove metallic foreign bodies unless they were readily accessible. If a dural defect was present it was repaired with fascia lata. When feasible the regenerated dura was separated from the brain. In no instance was the plate ever laid directly on cerebral tissue.

After the osseous border of the defect had been exposed the periosteum was separated from the endosteum at the inner table and was reflected upward and backward exposing the desired amount of the outer table. The tantalum plate was placed over the defect. If it was larger than desired it was trimmed with the tin shearers. By holding it in position its border was marked by a periosteal elevator. Then using a T-shaped chisel with the vertical blade 0.03 inch in length, a groove was cut along the mark. The outer diploe was removed to this depth with a chisel to prepare the ledge. The plate was placed in situ and pressure was made on the dome with a wooden hammer while the latter was gently tapped with another hammer, which made the border spread out to secure the plate firmly (fig. 1). The borders of the periosteum were pulled toward each other with absorbable sutures, and the scalp was closed with a single layer of interrupted silk sutures. A moderately snug bandage was applied.

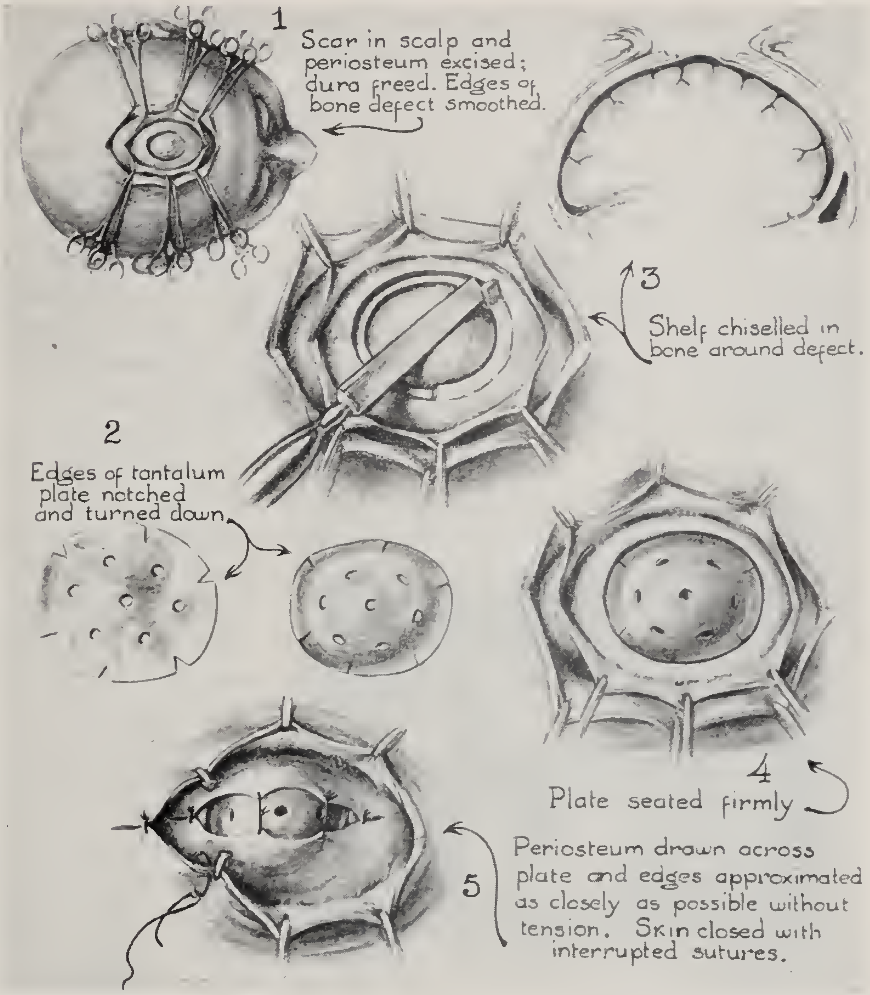
1
Scar in scalp and periosteum excised; dura freed. Edges of bone defect smoothed.
3
Shelf chiselled in bone around defect.
2
Edges of tantalum plate notched and turned down.
4
Plate seated firmly
5
Periosteum drawn across plate and edges approximated as closely as possible without tension. Skin closed with interrupted sutures.

FIG. 1. The preparation of the tantalum plate and a technic of cranioplasty illustrated.

DISCUSSION OF RESULTS

All of the patients had received their wounds during combat and were sailors or marines. Plastic procedures of the scalp were required in 2 cases to close the incisions over the plates. There were no deaths. The age varied from 19 to 26 years. All the operative wounds healed promptly except that of 1 patient. In this instance the dura was repaired with fascia lata, during which time the condition of the patient became poor. The plate had not been perforated and was used as an onlay. The border was placed beneath the periosteum and the scalp was facilely closed. Serum collected beneath the scalp and required repeated aspirations and caused the incision to separate. At the end of 8 weeks it was evident that the wound would not heal, and the plate was removed. Four patients were transferred to other hospitals after the wounds had healed but before their records were studied statistically. Twelve men were interviewed.

The average length of time between the injury and the cranioplasty was 3 months and 19 days. Two patients had experienced 3 previous operations, 3 patients had had 2 previous operations, and 7 patients had experienced only 1 previous operation. Two patients had metallic foreign bodies present within the calvarium which were not removed. Four patients had osseous fragments within the skull or in the brain substance proper. All of these fragments were removed. The cultures made from them revealed no bacterial growths. These pieces of bones had been enveloped by a delicate fibrous tissue with moderate fluid present (fig. 2).

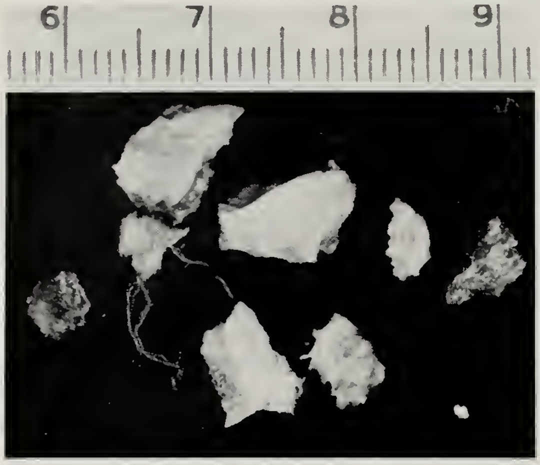

Fig. 2. Eight pieces of bone removed from the frontal lobe. They were located 5 cm. beneath the cortex. Culture for bacteria revealed no growth.

All of the patients presented symptoms at the time of admission. None was able to run, lift, or endure vigorous exercise. These activities caused a bulging of the scalp overlying the defect associated with the sensation of vertigo or threatening syncope. All were fearful of getting struck over the unprotected area. All of the patients were conscious of their disfigurement, desired to avoid social gatherings, and were anxious to obtain the plastic operation before proceeding to their homes. All had pulsations of the scalp covering their defects. Seven had tenderness over the defects of whom 5 suffered with headaches, 1 suffered with visual disturbance, and 1 had no additional symptom. One patient had headaches and visual disturbance. One had partial paralysis of the left upper extremity associated with an electric shock referred to this appendage upon flexing the neck. One had paresthesia of both lower extremities. Another had headaches and anosmia. One had left hemiplegia and anosmia.

None of the patients presented the symptoms of convulsive seizures. One patient had an epileptiform convulsion caused by striking the cranial defect against the corner of the bedside table.

There was no correlation between the symptoms and the size of the cranial defects. Two of the patients who had the greatest number of complaints had cranial defects of approximately 3 cm. in diameter which were among the smallest. The 3 patients who had huge cranial defects approximating one third of the skull and who were not operated during this period made few complaints.

Following cranioplasty there was 1 complete failure because the plate had to be removed. The other 11 patients could run and engage in physical exercise and were cured of their pulsations. The normal contour was restored and there existed no tenderness about the plate. There was a loss of anxiety regarding social functions. These patients used the expression that the head felt secure again. Two continued to have headaches which were milder. The visual disturbances of the 2 patients were not affected by the cranioplasty. The paraesthesia of the 2 patients had entirely disappeared. All 11 of the patients were happy that they had had the operation performed.

The Wechsler-Bellevue test was performed on all 12 patients. The 1 who was a hemiplegic and whose wound required the removal of the plate showed some evidence of organic brain deficiency. The other 11 demonstrated no evidence of mental impairment.

Comment

Patients with cranial defects have symptoms. Many of the fears that were formerly evaluated as purely psychic have a logical basis and exist as a result of rational behavior. The avoidance of exercise or the inability to run was due to the experience of the patients that these activities had induced syncope or a feeling of insecurity. The desire to protect the area of the cranial defect was protective. One patient inadvertently struck the corner of the table with this portion of the scalp and had a loss of consciousness associated with a severe epileptiform convulsion. In a skull with a defect, the brain is in a pathologic motility which may result in underlying gliosis and atrophy. This process appears progressive and can be arrested only by restoring the protective hydrostatic envelope and by making the skull again an enclosed organ. Therefore, all cranial defects should be repaired if there exists no outstanding contraindication.

The tantalum plate should not be placed on the cerebral tissue. The cerebral cortex should be completely separated from the dural arachnoid membranes. If there is a dural defect, it should be repaired with fascia lata. The repaired dural area may be separated from the cortex by injecting saline into the subarachnoid spaces using a small hypodermic needle. Thus the hydrostatic protective forces are restored. If the plate is placed on the cerebral tissue, there will develop adhesions which may alter the internal stresses in the hemispheres.

There may be some controversy regarding the contraindications for cranioplasty. It has been considered hazardous surgery to insert a plate into a contaminated wound. With the aid of chemotherapy many surgeons have done this successfully. Each surgeon must rely upon his own judgment and upon his knowledge of chemotherapy. The increased beneficial results that might accrue from early splinting of a wounded brain could well compensate for the additional risks incurred. If the plate cannot be inserted during the first 36 hours after the injury, it should probably not be used until after the scalp has remained healed for 2 weeks.

Abnormalities of cellular contents or of pressure of the spinal fluid are contraindications. Pleocytosis with or without xanthochromia probably represents an inflammatory process. Persistent increased pressure of the spinal fluid may indicate a space-occupying lesion. Choking of the discs is a definite contraindication.

According to surgical tradition a cranial defect should not be repaired if there exists a foreign body in the brain substance. It was demonstrated during World War II that the metallic fragments were rarely infected. Furthermore, the pieces of bones removed in this series of cases yielded no positive cultures. As a result of this experience and that derived from treating many hundred head injuries I believe that foreign bodies should not be removed routinely unless they are accessible A risk of further injuring the brain to remove routinely a foreign body represents a procedure of doubtful merit.

Severe neurologic disability does not necessarily constitute a contraindication. Two patients were studied who had huge cranial defects associated with aphasia and right hemiplegia. They were very anxious to have cranioplasties. After the operations performed by another surgeon their morale was amazingly improved. The cranial contour had been restored, pulsations had been eliminated, and appearances had been improved. The repair afforded protection to the intracranial contents and made the head "feel secure." In each patient the hemiplegia and aphasia persisted.

Epilepsy which was formerly considered a contraindication to cranioplasty now represents an indication for that type of treatment, especially since Grant and Norcross[2] have demonstrated that good results frequently ensue.

The thickness of the tantalum plate is of prime importance. If it is too thin and bends easily, it may represent a hazard to the intracranial contents. For cranial defects 3 cm. in diameter or larger the plates should be 25 mils thick. They should have multiple perforations to permit the interchange of fluid and facilitate the development of good blood supply. The failure described in this series was probably due to the absence of perforations in the plate. An associate had a failure with a solid plate; Voris[53] reported a failure; and Bakody[52] obtained success simply by removing the solid plate, making perforations, and replacing it.

The use of the plate as an inlay is a satisfactory technic for immobilization. The osseous membranes are kept separated in order that they may regenerate new bone which will anchor the plate and may entirely envelop it. The amount of bone that will regenerate depends greatly upon the blood supply to the periosteum and endosteum. Moreover, the plate cannot slip and requires no additional pieces of metal or extra surgical procedures for immobilization.

The plate can be prepared simply by a drill, tin shearers, ball peen hammer, and a wooden concave anvil. It is best to prepare it on the preceding evening. Any complicated method of prefabrication is condemned because it tends to render the procedure too specialized. Moreover, perfect contour of the cranium is not mandatory for excellent cosmetic results since exact symmetry of the skull does not exist normally.

CONCLUSION

All cranial defects should be repaired, if possible, since they produce altered physiologic processes involving the brain that cause symptoms. These particular symptoms disappear after a successful cranioplasty. The use of a perforated tantalum plate of 25 mils' thickness as an inlay in the cranium as described constitutes a uniformly successful method of repair.

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(*Continued on page 545*)

THE INFECTIOUS HEPATIDITES*†

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INFECTIOUS diseases may cause jaundice by primary or secondary involvement of the liver (table 1). The diseases in which the liver is the primary site of damage may be divided into 2 groups, those due to spirochetes and those due to viruses. Spirochetal hepatitis or leptospirosis includes two closely related forms, that caused by Leptospira icterohaemorrhagiae and that caused by Leptospira canicola. The virus forms of hepatitis are infectious hepatitis, serum hepatitis (homologous serum jaundice), yellow fever, and Rift Valley fever. The latter 2 will not be discussed since their sharp geographic limitation renders them no problem in this country.

TABLE 1
Infectious Hepatidites

- I. Primary
  - A. Virus
    - 1. Infectious hepatitis
    - 2. Serum hepatitis
    - 3. Yellow fever
    - 4. Rift Valley fever
  - B. Spirochetal
    - 1. Leptospirosis icterohaemorrhagica
    - 2. Leptospirosis canicola
- II. Secondary
  - A. Virus
    - 1. Infectious mononucleosis
    - 2. Primary atypical pneumonia
  - B. Bacterial
    - 1. Septicemia
    - 2. Pneumonia
    - 3. Brucellosis
  - C. Spirochetal
    - 1. Syphilis
  - D. Protozoal
    - 1. Malaria
    - 2. Amebiasis

Infectious hepatitis is believed to be the epidemic analogue of the disease formerly called acute catarrhal jaundice.[1] It is also believed that acute yellow atrophy frequently represents a severe and fulminant form of infectious hepatitis.[1, 2, 3, 4] The relationship of infectious hepatitis to homologous serum jaundice, a form of jaundice appearing occasionally as a sequel to the administration of blood, plasma, or human biologic products, is still obscure.[5, 6] It has been clearly shown in both diseases that a filtrable

TABLE 2
Comparison of Infectious and Serum Hepatitis

	INFECTIOUS HEPATITIS	SERUM HEPATITIS
Etiology	Virus	Virus
Size	Less than 65 mμ	Less than 65 mμ
Heat resistance	56° for 30 min.	56° for 30–60 min.
Cold resistance	High	High
Chlorination	Resistant	?
Epidemiology		
Route of transmission	Enteral	Parenteral
Demonstration of virus	In stools and blood	In blood only
Incubation period	15–40 days	60–140 days
Onset (prodromes)	3 types: influenzal, insidious, and acute abdominal pain	Insidious
Clinical picture	Identical	Identical
Immunity		
Homologous	Present	Present
Heterologous	Absent	Absent

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agent is responsible. Although the physical properties of the 2 viruses, including apparent size and their relative resistance to temperature extremes, are similar, they have certain biologic differences (table 2). Although early studies by Oliphant[7] were interpreted as demonstrating a cross immunity and, therefore, an identity or close relationship between these 2 diseases, more recent work by Neefe[6] and his co-workers has demonstrated that there is a specific immunity for each disease. It has not been possible to demonstrate protection against 1 disease in volunteers who have had the other.

The clinical pictures, once the diseases are

TABLE 3

Differential Diagnosis of the Infectious Hepatidites

	INFECTIOUS HEPATITIS	SERUM HEPATITIS	INFECTIOUS MONONUCLEOSIS	LEPTOSPIROSIS
Onset (Prodromes)	Influenzal (70%) Insidious (25%) Acute abdominal pain (5%)	Insidious	Influenzal	Influenzal
Epidemiologic history	Gastroenteritis 3–6 wks. before	Inoculation 60–140 days before	Exposure to similar illness 7–9 days before	Exposure to rats
Clinical picture (Syndromal)				
Fever	Early, disappears with jaundice	Absent or low grade	First few days	High
Malaise	Present	Present	Present	Present
Fatigability	“	“	“	“
Anorexia	“	“	“	“
Nausea	“	“	“	“
Vomiting	“	“	“	“
Epigastric or R.U.Q. pain	“	“	“	“
Dark urine	“	“	“	“
Physical examination				
Rash	Rare	Rare	Frequent	Occasional
Adenopathy	Frequent, moderate	Frequent, moderate	Very frequent, prominent	Occasional
Liver enlargement and tenderness	Present	Present	Present	Present
Pneumonitis	Rare	Rare	Frequent	Frequent
Meningoencephalitis	Rare	Rare	Frequent	Frequent
Laboratory data				
Leukocytes	Normal or low	Normal or low	Normal, low or elevated	Elevated
Lymphocytosis	Present	Present	Present	Absent
Polynucleosis	Absent	Absent	Absent	Present
Abnormal lymphocytes	Present	Present	Present	Absent
Elevated sedimentation rate	Rare and slight	Rare and slight	Frequent	Frequent
Evidence hepatocellular jaundice	Present	Present	Present	Present
Specific diagnostic measures	None	None	Heterophile	Specific agglutin reaction. Leptospira in blood and urine
Renal lesion	Only with deep jaundice	Only with deep jaundice	Infrequent	Frequent
Azotemia	Rare	Rare	Rare	Common

established, are identical.[6] In general, however, the onset of serum hepatitis is usually more insidious with minimal fever, whereas in the case of infectious hepatitis the onset is more often "flu-like" with fever a prominent symptom.

The prognosis of these 2 forms of hepatitis may or may not be different. The mortality rate reported in serum hepatitis has been higher.[8, 9, 10] This, however, may be due to the fact that during the War serum hepatitis was so frequently seen in patients who were otherwise debilitated and to whom blood products had been given because of severe trauma or other disease. No significant difference in the tendency to develop a chronic course has been demonstrated.

The clinical picture has been completely described and a mere listing of symptoms is of little value. There are certain cardinal features of the disease which are, on the one hand, shared by several other infectious forms of hepatocellular jaundice, and, on the other hand, aid in distinguishing these different diseases (table 3). Whereas serum hepatitis is consistently insidious in onset,[6] only rarely being associated with significant fever, two thirds of the cases of infectious hepatitis have an influenzal type of onset, about one fourth are insidious, and one twentieth show a picture simulating the acute abdomen.[11] Although less true in civilian cases, a history of an attack of gastroenteritis occurring 3 to 6 weeks before the hepatitis was frequent in cases of infectious hepatitis seen in the Army.[12] This is not noted in any of the other conditions listed.

In the syndromal stage of the disease, malaise, fatigability, anorexia, nausea, vomiting, epigastric discomfort, and dark urine are common to all. Once the disease is established fever is rare in infectious or serum hepatitis, common in Weil's disease, and common during the first few days of infectious mononucleosis. Hepatomegaly is common in all. Splenomegaly is rare in leptospirosis, common in infectious mononucleosis, and occasionally present in primary virus hepatitis. Lymphadenopathy is often a striking feature of infectious mononucleosis and is frequent in the other diseases cited. Rash is common in infectious mononucleosis and rare but occasionally seen in the other diseases cited. Evidence of pneumonitis is common in Weil's disease, less common in infectious mononucleosis, and rare in primary virus hepatitis. Laboratory evidence of a renal lesion, with or without azotemia, is common in leptospirosis but rare in the others. The white blood cell count, presence of atypical lymphocytes, and the serologic tests specific for leptospirosis and infectious mononucleosis are of great aid in diagnosis. Demonstration of spirochetes in Weil's disease is, of course, critical in diagnosis.

Although infectious hepatitis should always be considered in the differential diagnosis of jaundice, it is equally important to recognize the presence of hepatitis without jaundice. This may occur in infectious hepatitis, serum hepatitis,[6] or infectious mononucleosis.[13] When a patient with or without febrile prodromes complains of malaise, fatigability, anorexia, fullness or dull discomfort in the epigastrium, and has an enlarged, tender liver, anicteric hepatitis should be considered (table 4). Once the febrile period

TABLE 4

Anicteric Hepatitis

History	Fever frequent Malaise Fatigability Anorexia Nausea (with or without vomiting)
Signs	Hepatomegaly Tenderness or queasiness on compressing epigastrium or right upper quadrant
Laboratory work	White blood cell count normal or low Bile in urine with or without hyperbilirubinemia Urobilinogenuria Impaired liver function Bromsulfalein retention Abnormal flocculation tests: Thymol turbidity Cephalin flocculation Elevated alkaline phosphatase Elevated serum globulin

is over, if such a patient has laboratory evidence of hepatic involvement, a diagnosis of anicteric hepatitis should be made.[14, 15] Whether this anicteric hepatitis is due to the usual virus agents causing infectious and serum hepatitis, or to the agent causing infectious mononucleosis as shown by the heterophile agglutinin reaction, or to some other infectious agent, is relatively unimportant in the management of the case.[14] The propensity for chronicity[15] and, therefore, the need for careful treatment have been demonstrated.

The apparent benignity of infectious hepatitis has been largely disproved by events of recent years. Although the usual mortality is under 0.5 per cent,[1] under some conditions it is much higher. A mortality of almost 20 per cent has been described in serum hepatitis occurring in individuals debilitated by trauma.[9] Virulent epidemics with an even higher mortality have been described.[16] The difficulty of prognosis in an individual case of infectious hepatitis has been stressed.[6] While this difficulty is in general true, several criteria can be of help. A deeply jaundiced patient is always seriously ill and should be vigorously treated and carefully watched. If anorexia or nausea persist, care should be redoubled.[11] As a corollary to this, the patient who continues to eat in spite of a deep jaundice is doing well. Neuropsychiatric changes in patients with severe hepatitis may often be a clue to incipient liver failure.[17] The change from a coöperative, pleasant patient to an irascible, difficult, or tremulous one often heralds impending coma.

Recent attention has been focused on the possibility of acute infectious hepatitis resulting in chronic liver disease. Lucke,[18] who has done classic work in the pathology of acute hepatitis, felt that patients who survived the acute episode recovered completely. Most workers, however, disagree with this tenet. Bloomfield[19] in 1938 stressed the history of acute hepatitis in 10 per cent of a group of cirrhotics studied in his clinic. He felt that the initial insult of acute hepatitis was the forerunner of the eventual cirrhosis in these patients. More recently Howard and Watson[20] found an incidence of a history of acute hepatitis with jaundice in 33 per cent of a group of patients with cirrhosis. This group consisted largely of patients from a rural area who denied alcoholic intake. There have been a number of studies clearly demonstrating impairment of liver function with or without symptoms of chronic liver disease years after an attack of hepatitis.[21-24] This clinical evidence, although suggestive, cannot, however, be considered critical proof that acute hepatitis can result in permanent chronic liver disease. More crucial is the recent evidence from British[25] and Scandinavian[26] workers obtained by serial liver biopsies in the course of hepatitis. These observers have unequivocal evidence of the progression of acute hepatitis to portal cirrhosis. The frequency with which this occurs cannot at this time be estimated. The fact, however, that Barker, Capps and Allen[24] found that symptoms, signs, and laboratory evidence of chronic hepatitis resulted in 18 per cent of a group of patients with acute hepatitis should serve as a warning of the frequency with which disabling sequelae of acute hepatitis may occur.

It is with reference to this tendency of infectious hepatitis to become chronic that anicteric hepatitis assumes major importance. Since, in the absence of jaundice, this form of the disease is more likely to be overlooked than the more dramatic cases associated with obvious icterus, anicteric hepatitis is less likely to receive adequate treatment.[19, 27] That anicteric hepatitis can lead to prolonged disability has been shown.[27] The hazard of the development of a chronic hepatitis with or without a true cirrhosis is, therefore, magnified.

In 1938 Bloomfield[19] drew an analogy between the life history of infectious hepatitis and glomerulonephritis. He felt that just as chronic nephritis may result from an antecedent attack of acute nephritis, overt or overlooked, so may a parallel situation exist in the case of hepatitis. This possibility is illustrated in figure 1.

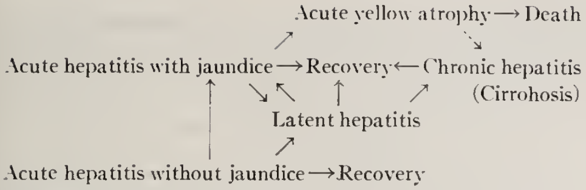

Fig. 1. Life history of hepatitis

The treatment of infectious hepatitis has four purposes: (1) to prevent sequelae, (2) to prevent fatalities, (3) to return the patient to an active life as soon as feasible, and (4) prevention of further liver damage. The keystone of treatment of this disease is rest and diet. Complete bed rest should be maintained until icterus and/or hepatomegaly and right upper quadrant tenderness have disappeared, urine urobilinogen is at a normal level, and bromsulfalein retention is 5 per cent or less at 45 minutes (5 mg. per kg.). If the patient is allowed to be active before these criteria are satisfied, relapse is frequent. When these criteria have been satisfied, return to activity should not be abrupt. It should be slowly increased with repeated evaluation of clinical and laboratory status. Return of hepatomegaly, hepatic tenderness, or laboratory evidences of liver damage makes return to bed rest mandatory. It is now generally agreed that a high caloric and high protein diet should be provided.[6, 8, 27] Whereas it was formerly felt that the fat in the diet should be low, it has been recently shown that a moderate fat intake may be allowed if the protein in the diet is high.[28] The diet should consist of 2,500 to 3,000 calories per day with $1\frac{1}{2}$ to 2 grams of protein per kilogram of body weight. Up to 100 grams of fat per day may be allowed.[28] On this program it has been shown that the period of hospitalization can be kept at a minimum, and it is believed that the incidence of chronic hepatitis will decrease.[27]

It is the opinion of most writers[6, 27, 29] that the lipotropic agents such as methionine and choline, which have been found useful in cirrhosis, offer little in acute hepatitis. With the provision of a high protein intake little can be added by supplementing with the lipotropes. Capps and his co-workers[27] have emphasized the necessity of avoiding additional liver damage. They point out that surgery on a patient with acute hepatitis is extremely hazardous. Anesthetics, the short-acting barbiturates, alcohol, saline purges, and opiates may add to the liver damage, induce a relapse, or have an exaggerated physiologic effect on the patient with hepatitis.

Whether or not such a program lowers mortality is not known. It was the impression in a large group of patients with hepatitis in an overseas territory that it did. It is my impression, furthermore, that patients who represent potential fatalities by the criteria earlier outlined should be given parenteral plasma protein, either albumin or plasma. Use of the latter substance is justified only if the potential risk of the hepatitis is greater than the approximate 5 per cent risk of inducing serum hepatitis by the use of pooled plasma.

In the prevention of these diseases certain cardinal points must be kept in mind. It seems clear that most of the transmission of infectious hepatitis is via the gastrointestinal tract.[6] Therefore, troops in the field and campers should avoid water from a questionable source. There is some evidence that the incidence of infectious hepatitis during an epidemic may be decreased by the injection of immune globulin into exposed individuals.[6] Patients with infectious hepatitis should be given the same form of isolation precautions as are used in a disease like typhoid fever.

As a part of the prevention of serum hepatitis, it is unwise to use blood from donors who have a history of hepatitis or anything resembling it during the previous 6 months. Pooled plasma should be used only when absolutely necessary. In this connection, Oliphant[30] has stated that the virus of serum hepatitis can be inactivated by ultraviolet irradiation. Grossman and Saward[31] have suggested that plasma be treated in this fashion to prevent transmission of serum hepatitis. The method of vaccination using multiple doses from the same syringe should never be practiced.[32] Syringes used for drawing blood or for administering any parenteral injections should be thoroughly cleansed and sterilized. There is no good evidence that immune globulin is effective in preventing serum hepatitis,[6] but further studies are necessary for adequate evaluation of this measure.

It is hoped that improved ability to recognize infectious hepatitis with or without jaundice and to provide appropriate management will lead to a decreased incidence of chronic hepatitis and possibly to a decreased mortality rate.

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ONE CHALLENGE OF AMERICAN YOUTH*

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THE challenge of youth today in America that I would emphasize for you is that universal challenge of all children in all times, namely, that they be given the opportunity within the home and within the community to develop satisfactorily and satisfyingly through the fulfillment of certain well defined, inner emotional needs inherent in all children. The satisfaction of these needs constitutes the tasks of the child's development, and in so far (and in that degree) that these inner needs are met by the individual parent and particular society of the child, just so far is that parent a good parent and that society an adequate society. Let us consider these needs and tasks of childhood.

The first need of the normal and healthy infant as an insurance of his normality and health is the establishment within himself of a firm feeling of security and love in relation to his parents. By security we mean the feeling that he is wanted and loved and in turn, perforce of these, that the physical needs of the hour and of the future will be met by these seemingly omnipotent factors (people) that move in his vicinity. What I would emphasize here, however, is that the child is not merely a passive, oral, receptive individual, though he may seem to approximate this condition in his early months of life, but he himself responds to positive and negative elements, and more particularly, as far as is our concern of the moment, he builds up definite defenses against the negative aspects of his environment.

What are some of the more important factors that aid or hinder the infant and young child's establishment of this feeling of security within himself? I have spoken of the tremendous value of the actual and repeated demonstration of love for the child by the mother and father. It is not so many years ago that we in medicine, particularly in pediatrics, emphasized the tremendous importance of habit training and of the routine handling of the child. We placed the child on a time schedule in relation to his food and drink and the expression of his bodily needs and wants; but in so doing I am afraid we placed the child on a rigid schedule also as far as the important diet of love—mother love and attention—are concerned. I think we are gradually coming to see that the child is more important than the schedule, and also that to deny the free, spontaneous, and frequent expression and reception of love and bodily contact on the part of the mother and child is definitely deleterious to the mental health and emotional adjustment of both of them. We have been in the past too afraid of the mother's love of the child, assuming that an overemphasis of her needs would make for a fixation of the child's responses to a level of a passively recipient individual who never would exert himself or give of himself to the end that he might attain these interpersonal grants. Because of this we urged the development of a parental attitude (or at least we complimented a parental attitude) that nearly bordered on the aggressive or obsessive type of parent. Such aggression or obsessive concern for minutiae of scheduling and control of mother love can be very easily interpreted by the child as a rejection, and certainly the latter is much more fraught with possible harmful effects than is the overemphasis of the mother's love or of the frequent expression of the mother's actual enjoyment of her infant.

In relation to this security need of the child it should be added that to the father also the child issues a challenge. In the early years the father, together with the mother, must set the tone of stability and security of the home to which the child may respond. The very presence of the mother and father, the fact that they do not leave for any length of time, the expression of love of one for the other, and, finally, the lack of aggression of one toward the other are situations and relationships to which the child will respond, and these responses will become fixed as far as his future relationships with people of both sexes are concerned. Again, the love of the mother for the father or vice versa usually is not reflected in less love for the child, and this the child notes.

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When one passes from the relationship between child and mother-father to the growth-provoking or growth-regarding situations that can be invoked in the family unit, we immediately are concerned with the three-cornered or four-cornered or even more-cornered relationship between the parents and any individual child, and all the other children in the family unit. These, in turn, extend the security feelings beyond the simple relationship of mother and child.

Let us consider the treatment of different children in individual instances. The child demands fair but not necessarily equal treatment with other children in the same family—and there is a great difference between fair and equal. For example, no child is going to be secure unless there is an inequality of treatment of him in relation to his brothers and sisters, as such inequality is demanded by their differences in age. There are privileges of age even at three and four years, and such privileges must be respected by the parent if the child is to consider the treatment fair. There are other differences in day-by-day existence that require a fairness rather than equality of treatment as, for example, in the presence of temporary illness or disability, the fair response on the part of the parent may not be one which can be generalized throughout the sibling group at that time, and hence "fairness" must always take precedence over "equality." And finally, the child is not secure when his jealousy and rivalry are rewarded by parental attention to him at the expense of his siblings even though he may realize and relish the temporary triumph that such affords. On the contrary, he becomes more uncertain of their love because he is now not convinced that his parents will always deal fairly with him.

Again, fair and consistent punishment in the form of loss of privileges to all children in the family is demanded in the interests of the child's security. And although at the present time no one advocates corporal punishment as the best method of inculcating good habits, in the interests of the child's own inner feeling of security it is necessary that he be punished in the way indicated above, i.e., with loss of privileges for errors in conduct. Otherwise, in the absence of any "punishment" whatsoever, two unfortunate things can occur. In the first place, the child gets an entirely unrealistic view of life as it is to be lived day by day and in the future. But more important, it seems to me, having done wrong he builds up an internal feeling of guilt which is not dissolved if the loss of privileges does not supervene. This is a very subtle mechanism, and the effects of these growing feelings of guilt are sometimes demonstrated only years later in the form of unexplained actions (even serious and repeated delinquencies) which seem to have the sole purpose of inviting the then felt need (or long felt need) for punishment for early deviations in behavior. I am sure that any psychiatrist will be taken to task in some quarters these days if he advocates that the child's omnipotence must be thwarted, but I feel that it is necessary to thwart it for the very reason that one's opponents would say it should not be, and that is in the interests of the child's inner peace, his security, and his mental health.

Regarding the more material aspects of his, the child's, environment, it is easily shown that among the needs of children is a need for a demonstrated respect for their possessions—the possession of their own toys, own playthings, knife, fork, spoon, cup, clothes, etc. Parental assistance is needed in order that the modification that is necessary for growth as regards behavior in this area is, of course, the continual emphasis on the desirability of sharing possessions with siblings and others, but at the same time the actual ownership must be respected. The child's responses here again will be such as to determine in large part his later attitude toward the material things in his environment, his strivings to attain them, the methods of his strivings, and the use or lack of use to which he will put them once they have been attained. His attitudes toward property have their origins here. He works to establish these proper attitudes, and he will continually work throughout the rest of his life to maintain them if they are adjustive and healthy, or to modify them if they are maladjusting and conducive to his ill health or unhappiness.

Finally, as regards the very young child, there are the fears and insecurity related to the learning process itself, which have to be considered by all of us. It soon becomes evident to every parent that there is a definite, though sometime subtle, conflict between the desire on their part to provide learning and learning situations and their desire to provide a protected environment for their child. In other words, almost everything in the child's environment about which he may be (and should be) curious can constitute a hazard to his physical well-being, and the ever present task of the parent in driving an even or compromise course between the two extremes of indifference or overprotection is a very difficult one. But it has to be done. On the one hand, the child may be prevented from giving the responses necessary for his education and development in any realm, whether it is physical, intellectual or emotional, and thus there will result an inhibited, uninformed or insecure child. On the other hand, the child may have all the freedom necessary to express his curiosity, to express his feelings, or to experiment in his environment, and by so doing may so harm himself in the attempts that learning again is hampered and delayed. In either case definite blocks can be set which will become evident in his later school career and in his social responses.

In summary, then, the first task or need of childhood, and the first challenge that he rightfully issues to his environment, is the need to establish in the midst of all of these externals an internal feeling of security, a security that allows a continuing positive response to the people of his later environments. If the child feels insecure, certain defenses, compensatory responses and overreactions are established by him to take care of his needs in childhood. These defenses are useful at the moment. They are his only protection, and they may continue to be useful and workable for many months or even years. However, their application to analogous situations in later life, that is, situations entailing the response to individuals, may fail to be workable and may result in unhappiness and inefficiency.

The second task of child development is the establishment of an inner control of aggression.

I need not emphasize with you, particularly with those of you who have watched the development of the child in its earliest years, that the human organism is endowed by nature with the drive to be aggressive toward its environment. Aggression is principally allied to the task of food-getting and all of the self-preservative maneuvers that the organism can make in warding off danger, in incorporating elements needed for life itself, plus the elimination of noxious or harmful substances. There is also that type of aggression with which perhaps we are more familiar, which is the normal response to frustration that we observe in all individuals. It is impossible, of course, to develop in the family structure of present-day society without being frustrated time and time again. In fact such frustration may indeed be a necessary factor for each step in our growth from infancy upward. But nonetheless the child must learn to control its expression.

The first controlling mechanism is an external control exercised by parents and other persons about us. The control is acquiesced in by the young child because of his fear of loss of parental love. In short, his first "conscience" is the person who stands beyond him in the figure of the mother and father. However, the individual child is endowed with the potentiality of incorporating, as it were, this external conscience, taking it up unto himself in the form of an internalized inhibiting mechanism. This at first is a highly personalized set of inhibitions. In other words, he says to himself, "Mother says you shall not hit brother," or "Mother says you shall not get dirty," or "Father says you shall not leave the yard." Coupled with this internalization of the prohibition, concomitant feelings of guilt are engendered which are aroused whenever this conscience ("person") is not obeyed. However, you thus see that at first it is really the mother who punishes or the father who punishes even when it is the child who "punishes" himself or controls himself, i.e., even when the child at first frustrates his own desires and controls his own aggression. These father figures and mother figures we carry with us throughout life, and they are continually exerting their influence upon our behavior. Hence, as parents it is necessary that we do not offer the child a too lax or a too rigid prototype for his own conscience.

However, because of this type of development, the task of continuing development now set for the child in respect to aggressive impulses is that he, the child, must gradually impersonalize his aggressive and destructive tendencies toward people around and beyond him who may frustrate or block him but also he must impersonalize the controlling or thwarting mechanisms within him that might tend to punish him too harshly if he did not do so.

Let us take the first part of this task for our consideration of the moment, i.e., the continuing need in all children to impersonalize their aggressive tendencies toward external frustrating agencies. The young child directs his hostile feelings and actions toward persons—toward his parents, toward parent substitutes in the form of other relatives, toward older siblings, teachers, scout leaders, policemen, or any other person to whose lot it falls to see that the customs and mores of the group are followed by him. Gradually, in the middle years, that is, from 6 to 12, this personalized aggression becomes directed against a more generalized set of people, such, for example, as against opponents in games. By the very fact that he can hold a concept of a frustrating person as being an "opponent in a game," he has made a first dilution of his hatred through impersonalization. And in this connection I am sure it is not difficult for you to visualize how, from time to time, the "game" or the "society of the game" breaks down or is disorganized by the very fact that the boy, under pressure of thwarting or being outpointed, again returns to an infantile type of expression of aggression, wherein it is directed toward a single person involved rather than maintaining the more mature stage of development of which we are speaking, where he is aggressive only toward the game requirements themselves. You see here the paradigm and model for the impersonalization of aggression or prejudice that must be accomplished by all children if they are to develop normal personalities and, indeed, become socially healthy individuals. You also see in this simple illustration in the playing field how we can revert and "repersonalize" our aggressions in that manner that we used normally as infants.

You can see also, I think, that society for the young boy and for all of us as adults provides certain restricted and controlled milieus for the expression of aggression, where aggression is held to be satisfactory by society as well as satisfying to the boy and to us.

But there are other devices that the child uses in this task of gradually impersonalizing his aggression. For example, the boy is aggressive toward evil fantasy-opponents in the form of "bad men" personified by some faraway race or hostile group, the evils of which he has become acquainted with by virtue of the conversations of adults about him. Certain fantasied groups do enable him to direct his aggression somewhat away from the persons in his immediate environment to the evils which these unknowns are supposed to perpetrate. Thus, his aggression is more or less intellectualized in fantasy and again becomes once-removed from parents, from siblings, and from those near at hand. But our aggressions must be even further impersonalized, and so it is that later they are inveighed against the evils in society itself, the social and economic evils and wrongs that we all try as citizens to rectify. And, finally, at the very pinnacle of our maturity and mentally healthful states, we fight aggressively against wrong principles of action and fight aggressively for all correct, human, and Christian principles.

And at every stage in this development the parent, the school and society at large must be alert to the needs of the child in furthering this growth process.

Now, a struggle that we as parents rarely see or appreciate in our children arises from the fact that the child is also faced with the constant task of impersonalizing the inner mechanism of control and self-chastisement which he has assumed in his attempts to control his aggressive demands. It is as if our first voice of conscience said, "It is she who will be aggressive toward me, and I feel that she will punish me." This inner fear of punishment we call our guilt feelings. There arises also with this guilt feeling a seeming need for punishment. Gradually, the inner conscience is no longer a group of individuals exerting their several influences, but it, too, under proper guidance becomes impersonalized in a succession of stages, to become at last a closely knit set of principles of right and wrong and values of good and evil which seems far removed from any particular, individualized person, but which nonetheless enables us to both act justly and to thwart our own desires without referring such frustration to any single person, external or internal. The child then asks our help and assistance not only in the more obvious task of controlling his aggression toward others, but also he needs help in this task which is the establishment of moral principles that will not result in self-aggression, self-punishment, and masochism.

Finally, there are two more tasks of mental health which have to be dealt with by all of us and which developmentally reach their initial stage of intensity during the years of adolescence, and at that time, in turn, lay the basis for future problems to be solved or for future adult mental health. I refer here to (1) the problems involved in the control and sublimation of the sex instinct, and (2) the problems involved in the final establishment of an actual independent adult status.

It is a mistake that many of us make to assume that the problems of the expression of, or the control of the expression of, the sexual instinct are thrust, newly structured, as problems at the time of puberty. For in the expression of the various bodily pleasures associated with the complex sex drive, the individual from his earliest years has been required by parental and social dicta to establish controls, and he has been limited to only partial expressions of these drives. These controls by parents and society have been directed at the many, varied, diffuse, infantile, and only partially developed components of the sexual drive in childhood, as distinguished from the complex sexual instinct as we recognize it later in its more localized, unified, and mature form. Adolescence, then, would seem to be merely a stage, though an extremely important one, in the direction of the instinct as it now has as its object the biologic functions of reproduction. Adolescence, then, seems to be the stage where the unification and control of all of the diffuse, pleasurable bodily expressions have to be established if the child or adult is thereafter to make a normal sexual adjustment.

The adolescent has to establish or reëstablish certain defenses against these inner drives, and in doing so needs the sympathetic and understanding aid of parents. In most cases this is accomplished without much difficulty. On the other hand, due to the inadequate or too rigid training of the child in early life, the adolescent may establish defenses against sexual expression that by their very extremeness and severity become quite disabling. Examples of these extreme defenses are tendencies on the part of the adolescent to periods of shyness, sometimes in so extensive an area of his daily life as to make the parents and his family physician wonder if he is becoming mentally ill. There may be, for example, an overreaction against these inner feelings in the sense that the child becomes overconscientious and assumes that everything that has to do with the sexual drive or the opposite sex is bad, sinful, or evil. He may turn to endless intellectualizations of his problems, with an absorption in some new, radical, or perhaps ultraconservative type of social order.

At any rate, whatever defense is established, it is extremely important that the parents recognize what the adolescent is trying to do by such maneuvers and thus, if necessary, be able and willing to help him, that is, to understand that these are the best possible defenses that he can erect at that time to control the increasing power and urgency of his instinctual drive.

Now, the second problem, the drive for adult status in adolescence, immediately too sets up certain serious conflicts. On one side of the conflict there is a drive on the part of the child to be independent of his parents, to make his own decisions regarding his comings and goings, to choose his own friends, to determine his own academic and educational future. On the other hand, there are always the fears that contemplated independence brings to his mind, fears of losing the parents and all of the material and spiritual gifts that they can give him, of the possibility of making wrong decisions, of choosing the wrong type of friends, and of selecting the wrong vocation on the basis of some temporary whim. This conflict makes for the typical state of adolescence, best described as a state of continual indecision and fluctuation of needs and desires. This is, in short, the characteristic "obsessional indecision" of the adolescent. It is not necessary to point out that educational, vocational, social or marital decisions and choices made now can be definitely neurotic choices, and that their influence on future mental health may be great.

And finally this, in turn, brings us face to face with another aspect of all these problems and needs that we must not overlook, namely, that these problems are not at all solved once and for all during our childhood. On the contrary, these are the ever-present problems of mental health and of emotional needs of all of us, problems that recur and are reactivated day by day, almost every day, and must be re-solved by us in the interest of our continued adjustment. They repeatedly reaffirm their insistent needs and persistent demands, and thereby they demonstrate as nothing else can the uncompromising and unchanging biologic bases of human action.

To paraphrase Herbert Spencer, the parent who meets these needs is indeed the parent of the most worth.

THE INTEGRATION OF CANCER CARE*

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WITHIN the last twenty years there has been a rapidly growing interest in the cancer process, the cancer patient, and the public health cancer problem. This has been fostered by the Government through the United States Public Health Service, by the local Health Department, and by voluntary organizations represented principally by the American Cancer Society. Endowed institutions have assumed a major responsibility for this type of program within certain local areas. Rapid growth of this integrated program is evident in the size of the budgets of these organizations, increased from a few hundred thousand dollars to about 14 million dollars a year for each of both Government and voluntary groups. The result has been to bring to the foreground both the word cancer and knowledge of the disease in all its manifestations, not only among doctors but especially among nonmedical groups. These organizations sponsor educational programs in grade schools, high schools and colleges, including all age groups and all walks of life. This is necessary, as cancer is a disease the present control of which depends upon education of the public. With present methods it would be impossible to make even a beginning in control of cancer unless the public is fully educated to the important role each must play in combating the disease.

Lay education has been allowed to outdistance the education of doctors and medical students, and nurses. As to medical schools, there had been little concentration on the treatment of cancer, the diagnosis of cancer, or the study of cancer as a disease. The time spent on cancer depended upon the interest of any professor in that type of cancer which applied to his own specialty. There had been almost no coördinated program.

The first coördinated program of which I know was created in Cornell Medical School at the instigation of Dr. James Ewing. As has been true of many parts of any cancer program, this met with some opposition from the Medical School faculty but not from the students. It did accomplish a great deal, and the Memorial Cancer Center in New York City is a monument to the work which Dr. Ewing fostered.

The second attempt with which I am familiar was the course in cancer developed about 1937 at the Harvard Medical School, mainly under the staff of the Huntington Memorial Hospital. This consisted of a 1-month optional course in the fourth year. It taught cancer as a disease, including basic science elements, diagnosis, treatment, the place of the cancer clinic, the place of the cancer hospital, the education of the public, and the public health aspects of the disease. This course was a great success. It has been very popular with the students.

The United States Public Health Service soon saw that it should encourage a more concentrated form of cancer teaching in most medical schools. The need for this was further borne out by some studies in the causes of delay in adequate treatment of cancer. In surveys conducted in New York City by Leach and Robbins[1] and Pack and Gallo,[2] it was found that a comparison of cancer cases for the year 1946 with those of 1938 showed that delay in that part of the treatment of cancer which should be the responsibility of the doctor had not decreased but had actually increased. A somewhat similar study conducted in the District of Columbia by DeLawter[3] in 1948 showed that there is still a considerable delay attributable to physicians. In order to correct such situations, the Public Health Service has fostered cancer teaching programs in medical schools by furnishing a grant of $25,000 a year to medical schools interested in and willing to perfect an organized program of cancer teaching. There has been no ironclad rule as to how cancer must be taught, but there is a tendency to suggest that it be taught in a vertical rather than in a horizontal manner. In other words, the program of teaching should be transdepartmental. The necessity for this transdepartmental approach has delayed the development of these programs and hindered the organization of cancer clinics.

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* Presented May 21, 1948, as part of Course No. 5 on Internal Medicine, sponsored by the American College of Physicians at Gallinger Municipal Hospital, May 17–22, 1948.

The vertical or transdepartmental approach to cancer implies not that cancer is a foreign body but that cancer is a systemic disease in which the local tumor is merely a manifestation of the total disease. A cancer of the stomach is not merely a foreign body in the stomach which requires removal. A cancer of the colon is not merely mechanical obstruction which must be released. For many years this has been the concept, and hence the surgeon has demanded his right to the control of the cancer case. Ninety per cent of our present methods of treating cancer are said to be surgical. Realizing that our present methods control only 25 per cent of cancer cases, we must admit that the 90 per cent contributed by the surgeon could be very greatly improved upon. There is good reason to feel that this improvement will not come from the surgical technician. It can come from the surgeon, from the internist, or from the biochemist, but it must come from someone whose primary interest is in cancer and not merely in one of the special technics now used in the treatment of a local manifestation of a systemic disease.

This transdepartmental concept does not imply that all forms of cancer could or should be treated adequately and expertly by any one individual. It does not imply that any one individual should consider himself as a cancer specialist capable of handling all aspects of the disease regardless of where the local tumor may be manifested or regardless of the extent of the local tumor. This is not possible. It is logical that cancer can be treated best by individuals who are allowed to see, handle, treat and study certain forms of the disease in a sufficiently large amount to learn the basic course of the disease and the problems peculiar to it, and to establish a program for improvement and study of that type of the disease. This has been appreciated in other fields much more readily. To create this type of cancer service, there must be a certain re-distribution of cancer cases. The necessity for this reorganization has caused concern among doctors who view progress of the cancer program with reservation.

The types of cancer service required are as follows:

1. Cancer service directed toward public health and preventive medicine.
2. Cancer service directed toward accurate, early diagnosis and adequate, rapid treatment.
3. Cancer service devoted to improvement in treatment and control of those forms of the disease in which the end results are not satisfactory or entirely dismal.

The public health and preventive medicine aspects of cancer are the most important. This realization is manifest in the rapid development of detection clinics or centers. The philosophy behind these centers is simple but fundamental. If cancer cures can be obtained in a good proportion of cases when the local cancer is found early in its development, it is reasonable that every effort should be made to find cancer at this early stage. Education of the public will serve to a certain limited extent. The education program can instruct the potential patient that certain minimal, apparently insignificant, but fundamental changes in his feelings or in his person must be regarded with suspicion and must take him immediately to the doctor. It can go even further and instruct that certain minimal changes will exist, but in no way be apparent to or realized by the individual himself, but these changes can be found if that individual will be examined at periodic intervals by a doctor who will look for them.

There are excellent reasons for encouraging this type of approach. For example, it is known that intraepithelial carcinoma of the uterine cervix can be diagnosed. This is cancer in its earliest recognizable form. Intraepithelial cancers which have not been treated but merely observed have become frankly invasive cancer within a period of time. From those which have been traced it is apparent that the intraepithelial change can exist for 6 to 12 years before invasive cancer becomes evident. Hence, if diagnostic methods are available, one has a 6- to 8-year period during which a lesion of the cervix which is not cancer in a clinical sense can be discovered and completely eradicated. Thus we could prevent the patient from developing invasive cervical cancer. If these examinations could be employed twice a year, there would be a dozen or more chances of finding the curable lesion. Under these circumstances, a method which is only reasonably accurate should discover most of these lesions. Such a method is available to every doctor, namely, visualization of the cervix as a routine measure in the prophylactic physical examination of all females.

However, it becomes apparent to anyone who has seen these intraepithelial cancers that such a cervix can look as innocuous as any of the benign cervices. But further simple tests are available. Small biopsies can be taken from every unhealed area and few of the intraepithelial cancers will be overlooked. Foote[4] has found that intraepithelial cancers occur almost entirely at the junction of the squamous epithelium of the cervix and that of the cervical canal. Biopsies should be taken from these areas. In addition, there is a second test which is easy to conduct but more difficult to interpret, namely, the Papanicolaou smear. These smears are positive in many cases of intraepithelial cancer. This type of test is easily done in any doctor's office. Interpretation is difficult and the availability of suitable laboratory personnel limits its use. This limitation can and must be overcome. If this program could be undertaken in all women, it is probable that there would soon be less need for the numerous papers written on Stages II, III and IV carcinoma of the cervix. It is admitted that this is an ideal and cannot be accomplished without coöperation from all sources.

I have used as an example the case of carcinoma of the cervix. In general, the same can be said of many other types of cancer. If routine proctoscopies were done and all small rectal polyps removed, it is possible that the number of abdominoperineal operations required for rectal cancer could be reduced. A large number of cancers of the oral cavity arise in leukoplakia. Removal of the areas can somewhat control the incidence of cancer. One can readily list similar examples. In short, if carried back far enough cancer detection can become cancer prevention.

The cancer detection clinic is organized for pure preventive medicine. It is a place where a completely well individual can present himself for a routine and reasonably complete screening type of prophylactic physical examination. It is not the place for the person who has cancer, thinks he has cancer, or has symptoms suggestive of cancer. These clinics serve to screen a part of the population for cancer, but they should be the foundation for a greater field of preventive medicine. Other pathology is found and other types of preventive medicine can and will be incorporated into this program in the future. The limitations of the examination of any detection clinic are set by the local medical society.

It should be made very clear to everyone that the purpose of these clinics is to put themselves entirely out of business. If every patient had or could have a physical examination at reasonable intervals, done in an accurate manner by the doctor of his choice, there would be little reason for such clinics. Today there is a place and there is a need. In the first 6 months of operation of a local detection clinic, information was gathered from the patient to evaluate the need.[5] It was found that only 1 in 4 individuals had had a physical examination within the 12 months prior to coming to the clinic. Of those who had had a physical examination, only two thirds had had a pelvic or rectal examination as a part of the examination and only one seventh had had an examination of the larynx by mirror. None had had a proctoscopy or vaginal smear. Of these 150 individuals, none had had a cancer detection examination within the prior 2 periods of 6 months. Strangely enough, it was found that 40 per cent of these individuals had actually asked their physicians for such an examination. None of these had obtained a complete examination. A third had obtained no examination and were dismissed with a smile, a pat on the back, and the assurance that they had no cancer. This usually served to lessen the confidence of the patient in the individual physician. It will be interesting to repeat these inquiries on a similar group of patients in five years. I feel quite certain that there will be considerable improvement shown.

The individuals examined are grateful for the examination and usually have full realization of its importance. They have nothing but good to say of the type of work which is done and are often anxious to help to enlarge the facilities for this work and to encourage others to have the same type of examination. Opposition to such an examination often comes from the general practicing physician. He seems to feel that this type of examination is in direct competition with office practice and fears that it will take away his patients and tend to "socialize" medicine. This fear is unjustified. Applications for examination seldom come from the patients of physicians who, as a routine practice, conduct complete physical examinations on all patients. Over 80 per cent of those individuals seen in the detection clinic had consulted their physician for some reason within the previous 12 months. If each of those physicians had conducted a complete physical examination in the same manner as is done in the detection center, the patient would have felt no need for this prophylactic physical examination.

The clinics are and must be very careful to assure the patients that there is nothing special to such an examination. This reaffirms in the patient's mind that the examination which he may previously have received from his doctor is as adequate and as good a prevention examination as can be obtained at present. It is extremely unfortunate if any propaganda or any statement is issued by a clinic which implies that the cancer detection examination conducted at any institution includes tests and facilities which are not available to the general physician. This may be true in the future if certain clinics are used for research purposes, but it is not true now and should not be so represented to any patient or to the public.

The future of the detection clinic is two-fold: First, there will always be a group of patients at such a financial level that they must put off preventive medicine measures primarily because they feel they cannot afford the usual charge for such an examination. Detection centers must furnish the examination for these families who would otherwise do without them. Second, the detection clinic is the foundation of the preventive medicine clinic. In the cancer field alone there are many possibilities which have not been fully investigated. For instance, examination of a 50-year-old male should stress different points than an examination of a 30-year-old male. The common cancer in the latter is the malignant tumor of the testicle, while the common cancer in the former is of gastrointestinal origin. In addition, tests which are not specific for cancer but are positive in a high percentage of certain types of cancer might be coördinated so that by a series of tests one might select certain groups in whom there is considerable likelihood of silent cancer. These individuals could then be subjected to more detailed but expensive studies. Thus one might discover early asymptomatic cancer which cannot be found by ordinary examination. This type of work has been almost untouched. It is our hope to develop such a program in this vicinity to its fullest extent. If everything known at present about the diagnosis of cancer were available to every individual at the earliest possible opportunity, it should be possible to double our cancer cure rate today.

The need for the organized cancer clinic has been appreciated since 1930. At that time the American College of Surgeons suggested methods of organizing these clinics. Concepts were broad and good. They emphasized that cancer occupies only about 5 per cent of inpatient facilities of a general hospital in any one year. When this 5 per cent of the hospital load is divided among 100 per cent of the hospital staff, it is immediately apparent that any one individual can seldom have sufficient contact with any one form of the disease to develop better methods of treatment or learn more of the nature of the disease. In order to concentrate the cancer patients, they suggested that a cancer clinic or a department be established so that a relatively smaller number of physicians would have the opportunity of caring for these cases, and by virtue of concentration of the work, these men would be of greater help to the individual cancer patient.

They recognized that such an organization must be a coöperative enterprise. Because present-day methods of curative treatment consist essentially of surgery, X-ray and radium, they suggested that the basic elements of the clinic be the surgeon, the radiologist and the pathologist. Other sub-specialties have been added and are being added. They also recognized that a cancer clinic would be of little value unless there was a continuity of service between the clinic, with its outpatient diagnostic and treatment facilities, and the hospital, where inpatient treatment is carried out. Also, a cancer clinic would be of little value if there was so rapid a rotation of attending physicians that no one physician would have sufficient time to develop an interest or do other than report to the clinic at a given time of the year, and see and care for a small number of patients. These points are still the source of argument, almost entirely among the surgeons. In places and instances in which initial obstructions have been overcome and the ideal cancer service established, there has been a gradual disappearance of friction and a general acceptance of the program.

If cancer cases are to be concentrated in the hands of a few members of the various specialties in an institutional program, it is the duty of those doctors not merely to carry out the generally accepted forms of treatment but to spend considerable effort in an attempt to improve the methods of diagnosis and treatment of the given type of cancer which he has accepted on assignment. By this means better care will be made available, using present methods to best advantage and improving and developing new methods in the future.

The treatment of cancer often requires specialized equipment which is expensive. Concentration of cancer cases in cancer clinics will minimize unnecessary reduplication of equipment throughout a community. It is not implied that there should be a monopoly in any sense of the word, but serious thought must be given as to how many such units should be encouraged in any given population area. On the other hand, if any limitations are to be placed, those institutions handling the cancer problem must be of such caliber that each is doing the best possible job.

A troublesome problem in the cancer clinic today is in regard to the patient and his admission to a cancer clinic. There are no set rules and regulations which can govern all cases. There must be a compromise in many instances, but the primary objective must always be to insure that each patient can readily obtain accurate cancer diagnosis and adequate treatment. There is little trouble with the patient in the low economic levels. These patients have ready access to most cancer clinics. The only requirement is that they shall be sufficiently educated to come to the clinics for care. It is sometimes difficult to present cancer education literature in such a way that these people can understand it. The middle income group who are not able to afford specialized medical care also usually have ready access to the cancer clinic. It is still difficult to arrange for the group who are capable and willing to pay for medical care.

Cancer literature impresses upon all these people the need for securing adequate cancer care at the earliest possible moment. It also impresses upon many the logic of a cancer clinic, a cancer clinic staff, or a cancer hospital. These people readily understand that physicians who are entrusted with the care of large numbers of cancer patients must merely by application become quite capable of this type of care. Many feel that a cancer institution or organization is the place to which they wish to present themselves for cancer or suspected cancer care. There is no difficulty if the individual has a strong tie to his own physician, and can sit down with him and frankly discuss the problem. The physician is only too glad to avail himself of the services of the cancer clinic if such are indicated. However, there are a number of physician-patient relationships which are not on so firm a basis. The patient fears to ask a doctor for referral because he feels that this may bring forth a rebuke or cause a certain amount of unpleasantness. This, plus the fact that the cancer detection clinics are entirely open to any individual, has forced considerable issue upon all cancer clinics. More and more individuals are presenting themselves to such institutions in one of two ways. One group will come in, quite frankly state their story, indicate that they do not wish to infringe on anyone's rights or to discredit any physician in any way, but wish to obtain care through the cancer institution. If any one cancer institution is not in a position to offer them such service, they will find it through some other channel, because they desire this type of service. Often they will travel hundreds of miles just to obtain it. This is something that must be faced and admitted by all communities, since it exists and is becoming more and more evident each day. There is another group of individuals who have found that the simple method of obtaining such care is to find out the requirements for admission of a patient to a cancer clinic or institution and fit themselves into such requirements. After they have obtained the information desired, they may admit that they have not given the entire story in order to be eligible for this type of clinic care. Some had previously sought such care through usual channels and had been diverted from it.

The need for the cancer hospital is not as important as the need for organized cancer care within an institution. The cancer hospital as part of a medical center, or the cancer unit as part of the hospital organization, has great advantages. It will quickly see the need and provide the facilities for the care of the terminal cancer patients. Many general hospitals in their by-laws refuse admission to this type of case. The house staff has little chance to care for them as these patients must be discharged to furnish beds for curable cases. This creates a feeling of neglect among the terminal cancer patients, as their care in nursing homes or in their own home is sometimes not too well supervised unless one can install a system similar to that of the Montefiore Hospital in New York City.

Cancer services are a constant source of a large volume of cancer patients of all types: before treatment, during treatment and after treatment; cured and uncontrolled. All of these are necessary for the investigation of a problem relative to any one or more forms of cancer. Unless an organization exists wherein these patients can be readily obtained in sufficient numbers, it is impossible to conduct any studies over any reasonable period of time. This is a

(*Continued on page 545*)

19th annual Scientific assembly

SEPTEMBER 27-28-29, 1948 · HOTEL STATLER · WASHINGTON, D. C.

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

Modern Medicine and the Patient

Medical Society Building

In these restless days, a pause from our daily medical hurly-burly provides much needed relaxation. Due to the pressure of work, the reading necessary to keep abreast of the rapid advances in medicine, and numerous outside demands upon our time, we may attempt too quickly to reach diagnoses, and minimize or neglect the over-all picture of the patient. This is particularly true in the specialties, where we may view our patients as disease entities rather than as a whole.

In an effort to induce the "pause that refreshes," and to aid us in readjusting our sights on the total patient, a scientific program has been planned for the 19th Annual Scientific Assembly which should be helpful and stimulating. Appropriately the theme—Modern Medicine and the Patient—indicates its purpose to minimize specific diseases and to emphasize macroscopic as opposed to a microscopic visualization.

The Scientific Exhibit, featuring advances in research, and a comprehensive motion picture program will deservedly attract wide attention. Of special interest to the laity are the Public Health Exhibit and the Public Meeting. The latter will be decidedly different; four well known science writers will interview a nationally known physician on heart disease.

An Exhibit of Doctors' Arts and Letters will be something new. Much interest has already been shown in this project.

The social highlight of the Assembly will be the annual banquet to be held on Tuesday, September 28. As usual the Medical Society luncheon will be an important event on the opening day, September 27, the George Washington and the Georgetown medical alumni luncheons being scheduled for the two remaining days.

The Committee on Arrangements is confident that all in all this Assembly will measure up to the standards of its predecessors, and that those who attend will be rewarded by scientific stimulation and opportunities for fellowship.

Robert H. Groh

General Chairman
Committee on Arrangements

19th Annual Scientific Assembly

SCIENTIFIC PROGRAM

ALL SESSIONS IN THE PRESIDENTIAL BALLROOM, HOTEL STATLER

MONDAY, SEPTEMBER 27—MORNING SESSION

10:00 PROGRESS IN VIRUS CONTROL

Charles Armstrong, M.D.
Chief, Division of Infectious Diseases, Public Health Service, National Institute of Health

10:25 ELECTRONMICROSCOPIC VISUALIZATION OF BACTERIA

Stuart Mudd, M.D.
Professor of Bacteriology, University of Pennsylvania School of Medicine

11:05 RECESS

11:15 PROGRESS IN VENEREAL DISEASE THERAPY

Joseph E. Moore, M.D.
Associate Professor of Medicine, Johns Hopkins University School of Medicine

11:45 RECESS FOR LUNCHEON

MONDAY, SEPTEMBER 27—AFTERNOON SESSION

2:00 NUTRITION IN SURGERY

Isadore S. Ravdin, M.D.
John Rhea Barton Professor of Surgery, University of Pennsylvania School of Medicine

2:25 NEWER CONCEPTS OF INFANT FEEDING

William F. Burdick, M.D.
Associate Professor of Pediatrics, Georgetown University School of Medicine

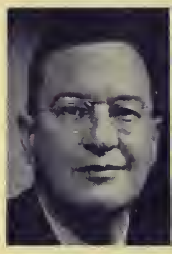
2:50 RECESS

3:00 PANEL ON CONTROL OF WEIGHT IN THE ADULT

—EMOTIONAL FACTORS AFFECTING APPETITE
Daniel Blain, M.D.
Medical Director, American Psychiatric Association

—TREATMENT OF OBESITY
Joseph H. Barach, M.D.
Associate Professor of Medicine, University of Pittsburgh School of Medicine

—TREATMENT OF UNDERNOURISHMENT
W. H. Sebrell, Jr., M.D.
Director of Experimental Biology and Medicine Institute, Public Health Service, National Institute of Health


Dr. Mudd

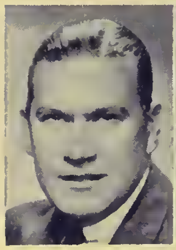
Dr. Barach

Dr. Sebrell

Dr. Ravdin

Dr. J. E. Moore

Dr. Blain


Dr. English

Dr. Burlingame

Dr. Blades

Dr. Hall

TUESDAY, SEPTEMBER 28—MORNING SESSION

10:00 WHAT THE PHYSICIAN CAN EXPECT FROM PSYCHIATRY

C. Charles Burlingame, M.D.
President and Psychiatrist-in-Chief, The Institute of Living, Hartford, Conn.

10:25 ADJUSTMENT TO AGE

Wingate M. Johnson, M.D.
Chief, Private Diagnostic Clinic, Bowman-Gray School of Medicine, Wake Forest College

10:50 RECESS

11:00 WHAT IS A NEUROSIS?

O. Spurgeon English, M.D.
Professor of Psychiatry, Temple University Hospital

11:30 RECESS FOR LUNCHEON

TUESDAY, SEPTEMBER 28—AFTERNOON SESSION

2:00 INJURIES OF THE CHEST

Brian B. Blades, M.D.
Professor of Surgery, George Washington University School of Medicine

2:25 CHRONIC ARTHRITIS

Russell L. Cecil, M.D.
Professor of Clinical Medicine, Cornell University Medical College

2:50 RECESS

3:00 PANEL ON FRACTURES

—IMMEDIATE CARE OF COMMON FRACTURES
Custis Lee Hall, M.D.
Clinical Professor of Surgery, George Washington University School of Medicine

—PHYSIOLOGY OF BONE HEALING
Robert W. Johnson, Jr., M.D.
Adjunct Professor of Orthopedic Surgery, Johns Hopkins University School of Medicine

—TREATMENT OF DELAYED AND/OR NONUNION
John R. Moore, M.D.
Professor of Orthopedic Surgery, Temple University School of Medicine

WEDNESDAY, SEPTEMBER 29—MORNING SESSION

10:00 Trends in Medical Education

William S. McCann, M.D.
Dewey Professor of Medicine, University of Rochester School of Medicine and Dentistry

10:30 Plans of the Public Health Service

Leonard A. Scheele, M.D.
The Surgeon General, Public Health Service, Federal Security Agency

11:00 Recess

11:15 What Is Good Medical Service?

Iago Galdston, M.D.
Executive Secretary, Committee on Medical Information, New York Academy of Medicine

11:45 Recess for Luncheon

WEDNESDAY, SEPTEMBER 29—AFTERNOON SESSION

2:00 Gout, the Forgotten Disease

John H. Talbott, M.D.
Professor of Medicine, University of Buffalo School of Medicine

2:30 The Diagnosis and Treatment of Infertility in the Female

M. Edward Davis, M.D.
The Joseph Bolivar De Lee Professor of Obstetrics and Gynecology, University of Chicago and the Chicago Lying-In Hospital

3:00 Recess

3:10 Panel on Allergy

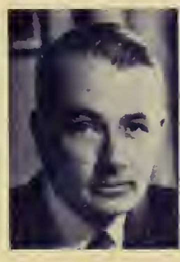
—Some Aspects of Allergy of the Respiratory System
Harry S. Bernton, M.D.
Professor of Preventive Medicine and Public Health, Georgetown University School of Medicine and Dentistry

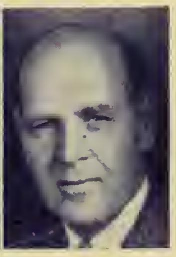
—Newer Aspects of Allergic Eczematous Contact Dermatitis
Rudolph L. Baer, M.D.
Consultant in Dermatology, Monmouth Memorial Hospital, Long Branch, N. Y.

New Nonspecific Therapy of Allergic Conditions
Leslie N. Gay, M.D.
Assistant Professor of Medicine, Johns Hopkins University School of Medicine

Dr. Talbott

Dr. Scheele


Dr. McCann


Dr. Burdick

Dr. Galdston

Dr. Davis

Dr. Baer

Dr. W. Johnson

Dr. Armstrong

Dr. Bernton

The Scientific Exhibit

The Scientific Exhibit will be on display in the South American Room at the Hotel Statler.

Subjects	*Sponsors*
Arterial Neuralgia of the Head	J. W. Watts, M.D., and R. H. Groh, M.D., George Washington University School of Medicine
Bronchospirometry in Diseases of the Chest	V. M. Iovine, M.D., and E. J. Beattie, Jr., M.D., George Washington University School of Medicine
Cancer of the Breast	Paul Kiernan, M.D., Georgetown University Hospital
Cancer of the Large Bowel	R. J. Coffey, M.D., Georgetown University School of Medicine
Cancer of the Thyroid	E. A. Gould, M.D., and Theodore Winship, M.D., Garfield Memorial Hospital
Craniocerebral Trauma	J. P. Gallagher, M.D., Georgetown University Hospital
Cytological Study for Cancer Diagnosis	R. E. Kelso, M.D., Georgetown University School of Medicine
Diabetes—Diagnosis—Treatment	The Diabetes Association of the District of Columbia, Inc.
Diagnostic Liver Function Studies	O. B. Hunter, Jr., M.D.
External and Fundus Ocular Diseases	R. W. Wilkinson, M.D., George Washington University School of Medicine
Orthoptics: Investigation of Fusion	Ernest Sheppard, M.D., and W. J. Romejko, M.D., George Washington University School of Medicine, and M. E. Kramer, Orthoptic Department, George Washington University Hospital
Gross Specimens of Neuropathology Embedded in Plastic	Walter Freeman, M.D., George Washington University School of Medicine
Liver Biopsy—Technics and Applications	L. J. Thomas, M.D., Leon Gerber, M.D., and H. J. Zimmerman, M.D.
Maxillofacial and Reconstructive Surgery	A. J. Suraci, M.D., George Washington University School of Medicine
Necessity for Routine Spinal Fluid Examination in Syphilis	S. R. Taggart, M.D., District of Columbia Health Department
New Concepts and Pathways of Abdominal Pain	Thomas Bradley, M.D., George Washington University School of Medicine
Plastic and Reconstructive Surgery	M. P. DeVito, M.D., Georgetown University School of Medicine
Protein Nutrition in Surgery	J. J. Weinstein, M.D., George Washington University School of Medicine
Roentgenologic Aspects of Rectal Bleeding	A. C. Christie, M.D., F. O. Coe, M.D., A. O. Hampton, M.D., and G. W. Wyatt, M.D.
The Management of Pain	Donald Stubbs, M.D., J. J. Andrina, M.D., and Paul Elsberg, M.D., Doctors Hospital
The Use of Plastic Tubing in Anesthesiology	E. B. Tuohy, M.D., Georgetown University School of Medicine
Vascular Headache	L. S. Blumenthal, M.D., George Washington University School of Medicine

Motion Pictures

An unusual number of scientific pictures, most of them in color, will be shown in the District Room, which adjoins the South American Room. A complete list of the films will appear in the official Program. In addition a schedule of films and the time they will be shown will be provided registrants.

Public Health Exhibit

The first Public Health Exhibit was presented in connection with last year's Annual Scientific Assembly. The Exhibit was so successful it was decided to make it a permanent feature of future Assemblies.

The Exhibit is sponsored by the following official and voluntary health agencies in addition to the Medical Society of the District of Columbia: District Health Department, District of Columbia Division of the American Cancer Society, District of Columbia Chapter of the American Red Cross, and the District of Columbia Tuberculosis Association. Funds contributed by these organizations have made the Exhibit possible.

A complete list of exhibitors will appear in the official program. Fifteen organizations aside from the sponsors will have exhibits on display.

The Public Health Exhibit will be shown in the Federal Room, adjacent to the South American Room where the Scientific Exhibit will be shown. It will be open daily from 10 a.m. to 5 p.m.

The Technical Exhibit

The Technical Exhibit will be on display in the Congressional Room, immediately adjacent to the registration desk. Those who attend the scientific sessions will enter the Presidential Ballroom by way of the Congressional Room. Forty firms are participating in the Technical Exhibit. A list of them follows:

Ayerst, McKenna & Harrison, Ltd.	(Booth 1)	Lippincott, J. B., Company	(Booth 2)
Beuchler's	(Booth 28)	Luzier's, Inc.	(Booth 9)
Bilhuber-Knoll Corporation	(Booth 14)	Maxwell & Tennyson	(Booth 34)
Boomhower, D. W., Company	(Booth 31)	Mead Johnson & Company	(Booth 29)
Borden Company	(Booth 7)	Merrell, William S., Company	(Booth 6)
Brand, Paul L., & Son	(Booth 4)	Parke, Davis & Company	(Booth 36)
Burroughs, Wellcome & Co. (USA), Inc.	(Booth 38)	Peoples Drug Stores	(Booth 37)
Camel Cigarettes	(Booth 40)	Philip Morris & Company, Ltd., Inc.	(Booth 32)
Cameron Heartometer Company	(Booth 8)	Sanborn Company	(Booth 26)
Ciba Pharmaceutical Company	(Booth 17)	Sandoz Chemical Works, Inc.	(Booth 16)
Davies, Rose & Company, Ltd.	(Booth 33)	Saunders, W. B., Company	(Booth 23)
Doak Company, Inc.	(Booth 11)	Searle, G. D., & Company	(Booth 20)
Doho Chemical Corporation	(Booth 22)	Sharp & Dohme, Inc.	(Booth 12)
Fleet, C. B., Company, Inc.	(Booth 25)	Smith, Kline & French Laboratories	(Booth 27)
Gibson Company	(Booth 3)	Squibb, E. R., & Sons	(Booth 15)
Haskell, Charles C., & Company	(Booth 35)	U. S. Vitamin Corporation	(Booth 13)
Kloman Instrument Company, Inc.	(Booth 39)	Walker Vitamin Products, Inc.	(Booth 21)
Lederle Laboratories	(Booth 5)	Washington Institute of Medicine	(Booth 19)
Liebel-Flarsheim Company	(Booth 18)	White Laboratories, Inc.	(Booth 24)
Lilly, Eli, & Company	(Booth 30)	Winthrop-Stearns, Inc.	(Booth 10)

Registration

As usual, arrangements have been made to register members of the Society before the opening of the Assembly. All members who find it convenient to do so are urged to register at the Society's Executive Offices on Friday, September 24, between 9:00 a.m. and 5:00 p.m. or on Saturday, September 25, between 9:00 a.m. and 1:00 p.m.

Visiting physicians, medical officers of the various branches of Government service, and Society members not previously registered may do so at the Hotel Statler, beginning at 9:00 a.m. on Monday, September 27. Residents, interns, dentists, pharmacists, medical students, and others invited can also register at that time. Badges are obtainable at the Registration Section. No one will be admitted to scientific sessions or exhibits without a badge.

Members planning to attend the Society luncheon on Monday, September 27, must register and pick up their tickets before 1:00 p.m. on Saturday, September 25. Each Active member will be entitled to one ticket without charge. Due to the use of the Presidential Ballroom for scientific sessions, its capacity for the opening day luncheon is limited. There will be 500 tickets available.

Associate members and non-members may purchase luncheon tickets at $3.50. Visiting physicians and non-members of the Society, except medical officers of the Army, Navy and Public Health Service, and physicians employed by the Veterans Administration, will be required to pay a registration fee of $3.00.

Tickets for the luncheons given by the George Washington University Medical Society and Georgetown University Medical Alumni Association may be obtained at the Registration Section. Tickets for the Medical College of Virginia Alumni Association dinner should be secured in advance from Dr. Charles P. Ryland, 4901 Massachusetts Avenue, N.W., telephone Ordway 2323, and for the Women's Medical Society dinner from Dr. Helen Gladys Kain, 1801 Eye Street, N.W., telephone Republic 4600.

An Exhibit of Doctors' Arts and Letters

Each year a special event has been sponsored by some ASSEMBLY committee. This year an unusually interesting project is being undertaken—a display of works of art and letters by physicians.

The Medical Society of the District of Columbia counts among its members many talented physicians. This will be evident to all who visit this exhibit. On display will be paintings, water colors, drawings, graphic arts, sculpture, creative photography, and published literary works. There will be awards for the best works of art.

Synopsis of Program

All meetings at the Hotel Statler except where otherwise noted

MONDAY, SEPTEMBER 27, 1948

9:00 A.M.: Registration
10:00 A.M.–11:45 A.M.: Scientific Program
12:15 P.M.–1:30 P.M.: Medical Society Luncheon, Presidential Ballroom
SPEAKER: ROBIN C. BUERKI, M.D., Dean, Graduate School of Medicine, University of Pennsylvania
SUBJECT: "What Is Wrong with Our Hospitals?"
2:00 P.M.–4:30 P.M.: Scientific Program
6:30 P.M. (6:00 P.M. Cocktails): Women's Medical Society Dinner, East Room, Mayflower Hotel
6:30 P.M. (5:30 P.M. Cocktails, Capital Room): Medical College of Virginia Alumni Association Dinner, Pan American Room
8:15 P.M.: Public Meeting, Presidential Ballroom
SCIENCE WRITERS QUIZ THE DOCTOR: HERBERT P. RAMSEY, M.D., Moderator
GUEST: HOWARD B. SPRAGUE, M.D., Harvard Medical School
WRITERS: FRANK CAREY, *Associated Press*; GERALD G. GROSS, *Washington Report on the Medical Sciences*; THOMAS HENRY, *The Evening Star*; RON ROSS, *Science Service*

TUESDAY, SEPTEMBER 28, 1948

10:00 A.M.–11:30 A.M.: Scientific Program
12:15 P.M.–1:30 P.M.: George Washington University Medical Society Luncheon, Presidential Ballroom
SPEAKER: MISS MARY DONLON, Commissioner of Workmen's Compensation, State of New York
2:00 P.M.–4:30 P.M.: Scientific Program
7:30 P.M. (6:30 P.M.: Cocktails): Annual Dinner, Presidential Ballroom
SPEAKER: MORGAN BEATTY, NBC's Noted Commentator, Author and Reporter

WEDNESDAY, SEPTEMBER 29, 1948

10:00 A.M.–11:45 A.M.: Scientific Program
12:15 P.M.–1:30 P.M.: Georgetown University Medical Alumni Association Luncheon, Presidential Ballroom
SPEAKER: THE REV. JOHN TRACY ELLIS, PH.D., Professor of American Church History, Catholic University
2:00 P.M.–4:30 P.M.: Scientific Program

(As stated elsewhere in the ASSEMBLY section, the Public Health Exhibit is open to the general public daily from 10:00 A.M. to 5:00 P.M.)

Special Features

Exhibits presented by Georgetown and George Washington University Schools of Medicine at last year's ANNUAL SCIENTIFIC ASSEMBLY attracted such wide and favorable comment that it was decided to continue them. These exhibits will depict recent activities and plans for the future of these institutions.

President's Page

LET'S MEET AT THE ASSEMBLY

The 19th Annual Scientific Assembly of the Medical Society of the District of Columbia will be held on September 27 to 29 at the Hotel Statler.

The Committee for the Assembly has spent a great deal of time and effort in arranging the programs, obtaining speakers, planning for the scientific and other exhibits, and the social events. Opportunity for hearing distinguished speakers and for orientation in the latest advances in medicine will be offered.

It is true that it is difficult to attend meetings in one's own city, but the officers of the Society earnestly hope that everyone will make a real effort to attend, both for the gaining of knowledge and for the invaluable spirit of fellowship in a common enterprise which characterizes the best medical meetings. Another and no less important element, which more than justifies the time and effort it requires—and it does require both these things—is the opportunity afforded to see one's friends, particularly those who work in the same community but are rarely seen in the press of our daily life.

We hope that your interest and enjoyment will be great, and that the impetus of this meeting will further the development of scientific medicine and professional coöperation in our city.

John Minor

Editorials

WHICH ARE THE LEADING CAUSES OF DEATH?*

The phenomenal decline in mortality rates during the past fifty years is evidence of the improved health of the American population and provides a measure of medical progress. As new methods of prevention and treatment have reduced mortality in the earlier years of life, more and more people live on to become victims of the diseases of old age. The increased number and percentage of deaths due to diseases of the aged are reflected in the rankings of the leading causes of death. Thus in 1945, diseases of the heart, cancer, intracranial lesions, and nephritis accounted for 58.4 per cent of all deaths; the combined average age at death from these four causes was 66.8 years. Average age at death from the three other leading causes (accidents, pneumonia and influenza, and tuberculosis) combined was 45.4 years and from all other causes except the seven leaders, 43.5 years. The four "older" causes, then, largely account for the relatively high average age at death of 57.4 years in 1945.

What are the implications of these variations in average age at death from the different causes? Traditionally, the causes of death are ranked on the basis of the number of deaths resulting from each cause. This method, while unquestionably valid in some cases, completely ignores the factor of age at death—a factor which is often significant in measuring the relative importance of the various causes. We seldom consider the death of an individual without taking into account the attending circumstances, especially the age of the decedent; yet we have heretofore disregarded the ages at death when considering deaths collectively. Of course, the mere event of death is often the only pertinent fact. To the individual himself, the gift of life cannot be evaluated in terms of age. To the physician, the death of a 68-year-old patient suffering from heart disease represents as much of a medical failure as the death of a 44-year-old tuberculosis victim. The younger decedent, however, is more likely to have been a breadwinner with a wife and young children; in addition to the loss of productive power occasioned by his death, his family may become an economic burden to society. This means that the "average" victim of heart disease, cancer, lesions, or nephritis represents a smaller loss to society than does the "average" victim of accidents, tuberculosis, or pneumonia. For certain purposes, then, the number of deaths is an adequate measure of the relative importance of the various causes of death; however, the loss to society resulting from a given cause depends upon the age as well as the number of its victims. For this reason, we propose to define two new measures for ranking the causes of death, to apply these measures to the seven leading causes of death, and to evaluate the significance of our results.

Two New Measures

The two new measures by which we propose to rank the leading causes of death are life years lost and working years lost. Unlike the number of deaths resulting from a given cause, both of these measures take into account the factor of age at death and both should prove useful in gauging the relative importance of the leading causes of death in terms of loss to society. Life years lost can be defined as the total of the life expectancies of all decedents; that is, it weights each death by the average number of years to be lived by the survivors who were born in the same year as the deceased. Since the life expectancy of white males (which at each age approximates the combined average for both sexes, white and non-white) in 1945 was more than twice as great at age 45 as at age 67 (26.3 years as compared with 11.4 years), 100 deaths, on the average, from the three "younger" causes resulted in as many life years lost as some 230 deaths from the four "older" causes.

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* This is the twenty-seventh in a series of guest editorials by distinguished physicians and laymen.

The second new measure, working years lost, can be defined as the total of the working life expectancies of the decedents. This measure differs from the first in that the years to be lived before age 20 and after age 64 are excluded from the computations of life expectancies; that is, the death of one person aged 65 adds 12 years to the total of life years lost but has no effect on the total of working years lost. The period between the 20th and 65th birthdays was adopted as the definition of working lifetime because it corresponds generally with the working habits of the American people. Of course, many persons begin work before age 20 and retire after age 65 and not all persons between the specified ages are classified as gainfully employed. A large proportion of the so-called "unemployed," including housewives, nevertheless do useful work and their deaths before age 65 represent working years lost to society. Moreover, the exceptions to the definition that all persons work between, and none work before or beyond, the period from age 20 to age 65 tend to have opposite effects on the working-years-lost total so that any error caused by the arbitrary age boundaries is diminished.

RESULTS AND ANALYSIS

Is the relative importance of the different causes of death materially influenced by the measure used? In order to answer this question, we will apply our two new measures to the seven leading causes of death as determined by numbers of deaths in 1945. Of a total of 1,402,000 deaths reported in that year, almost 74 per cent was accounted for by the seven leading causes combined. Life years lost and working years lost were calculated by multiplying the life expectancy and working life expectancy for each age group by the number of decedents within that age group who died of each cause. The calculated number of life years lost from all causes was 28,992,000, of which 60.5 per cent was due to the seven leading causes and, of the 13,913,000 working years lost, 53.6 per cent was attributable to these seven leaders.

In measuring the relative importance of the leading causes of death, we will consider both the rank of each cause and the percentage of total deaths, life years lost, and working years lost for which it was responsible. On the basis of numbers of deaths, diseases of the heart (considered as a group) ranked first with 30.3 per cent of the total, cancer ranked second with 12.6 per cent, lesions were third with 9.2 per cent, accidents were fourth with 6.8 per cent, nephritis was fifth with 6.3 per cent, pneumonia was sixth with 4.9 per cent, and tuberculosis was seventh with 3.8 per cent. Measured by life years lost, heart again ranked first with 19.3 per cent of the total, accidents ranked second with 9.7 per cent, cancer was third with 9.4 per cent, pneumonia fourth with 7.1 per cent, lesions fifth with 5.5 per cent, tuberculosis sixth with 5.3 per cent, and nephritis seventh with 4.2 per cent. The calculations for working years lost showed heart second, this time accounting for 12.1 per cent of the total; accidents ranked first with 12.6 per cent, pneumonia third with 8.1 per cent, then cancer with 7.4 per cent, and tuberculosis with 7.3 per cent; lesions and nephritis tied for sixth with 3.0 per cent each.

Several noteworthy points are revealed in this analysis by per cents and ranks. First, the variations in the percentages of the total number of deaths, life years lost, and working years lost due to the different causes fall into a pattern: each of the four "older" causes—heart, cancer, lesions, and nephritis—accounted for a larger proportion of the total number of deaths than of the total number of life years lost and, in turn, a larger proportion of the total number of life years lost than of working years lost. The three "younger" causes behaved in the opposite manner: accidents, pneumonia, and tuberculosis were each responsible for a larger percentage of working years lost than of life years lost and a larger percentage of life years lost than of number of deaths. Moreover, the range in per cent between the seventh and first causes varied considerably with the measure used; number of deaths gave a difference of 26.5 per cent (30.3 for heart less 3.8 for tuberculosis) while the corresponding difference for life years lost was 15.1 (19.3 for heart less 4.2 for nephritis) and for working years lost, 9.6 (12.6 for accidents less 3.0 for lesions).

These variations are the result of differences in the age distribution of the victims of the seven causes. Their net effect is to emphasize the "older" causes when the crude number of deaths is the basis of comparison. Thus, heart ranked first by two measures, numbers and life years lost. Accidents, on the other hand, ranked fourth on the basis of number of deaths, but ranked second by life years lost, and crowded heart out of first by working years lost. In this respect, it is interesting to note that the difference in working years lost due to accidents and heart is less than 1 per cent although heart killed over four times as many persons as accidents. The relationship between cancer and accidents showed a similar upgrading of the "younger" cause. Although cancer caused almost twice as many deaths as accidents, the two were almost tied for second place on the basis of life years lost, with accidents slightly ahead of cancer; but accidents took the lead away from heart by working years lost. Another significant change in rank occurs in the case of pneumonia, which was sixth on the basis of number of deaths, fourth when measured by life years lost, and third by working years lost. As might be expected, tuberculosis had a higher rank on the basis of the two new measures than when judged by number of deaths alone, while the reverse was true of lesions and nephritis.

WHO CAN HELP MOST?

What conclusions can be drawn from this application of two new measures of the leading causes of death? First, there can be no doubt that the relative importance of the leading causes of death varies considerably with the three measures used. This would probably not have been the case at the turn of the century when the number and percentage of deaths from the "older" causes was considerably lower and mortality from the diseases of childhood and early life proportionately higher. As more and more people nowadays live on into old age, crude numbers of deaths alone tend to obscure the "younger" causes and, consequently, to underemphasize their importance to society. Thus, the very increase in the number and proportion of deaths from the "older" causes is evidence of success in reducing mortality at earlier ages and in increasing life expectancy. Despite this fact, the rising number of deaths from heart disease and cancer has caused considerable alarm in our society. The higher ranking given to accidents by our two new measures would seem to suggest that the American people fear accidents too little. A complete cure for heart diseases (or cancer) in 1945 would have added fewer thousands of working years to the total life expectancies of the American people than would the prevention of all accidental deaths. In accordance with these findings, some of the emphasis in health improvement and medical research programs might well be shifted to accident prevention as a means of lengthening life and increasing productive power. Working years lost as a measure for ranking the leading causes of death points directly to the layman, for it is the layman's job to prevent accidents.

A word of caution is needed in reviewing our conclusions. It must be remembered that we have treated only deaths, not disabilities, from diseases and accidents. In future studies we hope to examine the losses to society resulting from illnesses and injuries.

For purposes of clarity, any actuarial discussion of our technics or of alternative methods for ranking the leading causes of death has been avoided. The technical aspects of the two new measures and a more complete analysis of their application to the leading causes of death will appear in a forthcoming article by Everett L. Welker, Ph.D., Associate in Mathematics, and myself, to be published by the Bureau of Medical Economic Research, American Medical Association. In this editorial, we are merely trying to establish the need for and significance of gauges other than crude numbers of deaths—gauges which will give a truer picture of loss to society. Both of our two new measures incorporate the age factor. In choosing between them, the use to which the results are to be put must be taken into account. Life years lost considers both working and leisure years while working years lost includes only those years in which society as a whole benefits directly from the economic contribution of the individual. If direct contribution to the national "income" is taken as the standard of social value, working years lost is the superior measure. On the other hand. life years lost takes into account the years of preparation for a productive life and the years during which one may contribute to society the wisdom born of experience. Moreover, the working-years-lost total is largely determined by the arbitrary definition of working lifetime while life years lost is based on the entire life expectancy of the decedent.

Certainly no single measure of the relative importance of the various causes of death is sufficient for all cases. Crude numbers of deaths, life years lost, and working years lost all have their merits and their limitations. In the final analysis, one is always led back to the conclusion that the true measure of social progress, and more specifically of medical progress, is the life expectation at birth. The average age at death from all causes and from every leading cause has risen in the past twenty years. According to all three measures, the importance of diseases of the aged has increased since 1930 and the importance of the diseases of earlier life has declined. This fact is in itself a positive sign of medical progress. The task of the physician is not to eradicate death from the face of the earth, but to prolong life and to relieve pain. Regardless of the measure used, the success of the American physician in carrying out his task cannot be denied. The layman, unfortunately, has not done his share to prolong life by reducing the surprisingly high totals of life years and working years lost from fatal accidents.

Frank G. Dickinson, Ph.D.
Director, Bureau of Medical Economic Research, American Medical Association

NEW PROVISIONS FOR CARE OF THE MENTALLY ILL

Two Acts of Congress relative to admission to Saint Elizabeths Hospital, both endorsed by the District Medical Society, were passed in the closing days of the session in June.

The first (Public Law 737, approved June 22, 1948), a provision for voluntary admission to Saint Elizabeths Hospital, originally proposed by the Society in 1938 and again in 1946, at last brings the District Commitment Law (in *this* regard) into line with all but about six of the states of the Union. Briefly, the law provides that any resident of the District, certified to be such by the Department of Public Welfare, may be admitted to Saint Elizabeths Hospital for "mental care and treatment" upon his own application, or if a minor, upon that of his parent, legal guardian or other legal representative. He must, of course, be mentally competent to the extent of appreciating his condition and what he is doing, and must satisfy the hospital staff of that fact.

He agrees on admission to give three days' notice in writing of any intention to leave the Hospital, and will be dismissed under those conditions except in the rare event that it would be dangerous to release him. In such a case the

Department of Public Welfare is authorized to take steps to refer the matter to the Commission on Mental Health. In the event that any agreement made with the Department of Public Welfare for the support of the patient is not kept, the Department may revoke its certification of the patient as a District charge. It is, of course, not intended by the law or by the Department that admission to Saint Elizabeths shall depend upon the ability of the patient or his family to pay; it is, however, only fair that the District shall be reimbursed to the extent of reasonable resources of the patient.

In view of the cumbersome commitment procedure, which not only subjects the patient to a formal hearing and to having his own family testify "against" him but also deprives him of all civil rights, it is to be expected and hoped that the new method of admission will be widely used.

The Act became effective August 21, and as this editorial is written, regulations are being prepared by the Federal Security Agency and the Department of Public Welfare.

The second Act (Public Law 861, approved June 30) permits the "by-passing" of Gallinger Municipal Hospital in those cases in which hospitalization of more than a few days appears likely to be needed. It was recommended, *inter alia*, by Dr. S. Bernard Wortis of New York, who conducted a survey of Gallinger for the United States Public Health Service at the request of the Commissioners of the District in the fall of 1947. His report was endorsed by the Executive Board of the Medical Society at the time.

The law provides that upon the affidavit of two or more "responsible residents" (it is reported that a physician may be considered such!) to the effect that a certain person is in urgent need of care in a mental hospital, a judge of the District Court may sign an "attachment" authorizing the apprehension of such person and his detention in Saint Elizabeths Hospital for a period not exceeding 30 days. He is to be examined within 5 days of his admission, and if found to be "of sound mind" after such examination he is to be discharged forthwith. Otherwise steps may be taken for his regular commitment.

This new provision will relieve Gallinger Hospital of some of its overloading and will save the patient the difficulty of adjusting to two hospitals instead of one. At the same time, the load on Saint Elizabeths Hospital will not be increased, since patients of the type contemplated are usually sent on from Gallinger to Saint Elizabeths in any event.

W. O.

In and Out of Focus

BY THE OBSERVER

The First Quater

It is pleasing to report that Medical Service of the District of Columbia, the Medical Society's prepayment plan, is making splendid progress. Of course it is too early to evaluate the soundness of its structure or the changes which will have to be made in it. What can be said at the end of the first three months of operation is that the response from the public and the medical profession has far exceeded expectations. In fact, it has been so overwhelming that the officials of Group Hospitalization, Inc., who are administering the Service, have been somewhat concerned. According to Mr. F. P. Rawlings, GHI's General Manager, his staff has been heavily burdened with applications for Medical Service contracts and other details in connection with the plan's operation. Every effort, however, is being made to cope with the situation, and Mr. Rawlings states that it is well in hand.

On July 1, 1948, 61,000 persons were covered by the plan. Applications have been received at the rate of about 500 for each work day. It is estimated that by the end of the first year, the SERVICE will have over 100,000 participants.

No such project could be undertaken without encountering problems in need of immediate attention. For example, there had been criticism of the plan by non-members of the District Medical Society in nearby Maryland and Virginia. They felt that they were being discriminated against when not permitted to serve their patients who came under the plan. The SERVICE Board of Trustees, recognizing the validity of this criticism, amended the plan's by-laws at its meeting on March 22, 1948, as follows:

41 (b) NON-PARTICIPATING PHYSICIANS

> "Medical services may at the discretion of the Board of Trustees be rendered subscribers by legally qualified doctors of medicine in good standing in other medical societies affiliated with national medical organizations; provided such physicians agree to conform to rules governing the operation of the Service. Such physicians shall not have a vote in the management of the affairs of the Service."

Following the adoption of the above amendment, Dr. Frank D. Costenbader, President of the SERVICE, addressed letters to all physicians residing in nearby counties within the Metropolitan Area, inviting them to participate as Coöperating Physicians. This privilege is also being extended to members of the Medico-Chirurgical Society, Inc. of Washington.

Another matter which has recently received the attention of the Board of Trustees is that of compensating anesthetists who are employed full-time by local hospitals. An agreement between physician-anesthetists and the SERVICE whereby direct payment would be made to the physician by the SERVICE was considered most desirable. However, it was agreed that if this proposal was not acceptable, authority should be obtained from physician-anesthetists to pay the hospitals directly for their services in accordance with the MEDICAL SERVICE fee schedule, or that subscribers to MEDICAL SERVICE be indemnified for their services. At the time this was written, mutually satisfactory arrangements had been worked out with most anesthetists and hospitals.

The need for the services of a physician to supervise the medical aspects of the plan has long been recognized. To secure a man with ability who had sufficient experience in organization work was not an easy task. Equally important, he had to be a practitioner in whom all physicians had confidence. Fortunately for the SERVICE, Dr. A. Clagett Gray, widely and favorably known among Washington physicians, was found to be available. He is now serving as part-time Medical Advisor.

All in all, the prospects for the future of the SERVICE are bright. But only time and experience will determine the extent of its value to the community and the profession. Your Observer is confident that the inauguration of the SERVICE will prove to be one of the most constructive steps ever taken by the Medical Society.

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Washington—Mecca of Mediocrity The incompetence of many Government workers is proverbial. The lowest ebb was reached during the War when many agencies mushroomed overnight and thousands of persons obviously not qualified for their tasks were employed. Typists were found acceptable who had only a nodding acquaintance with a typewriter. Secretaries were frequently sadly deficient in knowledge of their duties. Executives possessed little in the way of experience or ability to commend them for their positions. While the situation has materially improved in the postwar years, Government agencies still have sizable quotas of incompetents. Many of them would find it difficult if not impossible to hold comparable non-Governmental positions.

While one may find humor in such a situation, it is really no laughing matter—certainly not for physicians. For on sober thought, it becomes only too clear what the expansion of the bureaucracy which exists in Washington would mean to the public and the medical profession if the Administration's national health program were adopted.

In all fairness, it should be pointed out that there are thousands of competent Government employees. They are serious, conscientious workers who endeavor and often do give a good account of themselves. But even they have an entirely different feeling about their assignments than do those in private enterprise. Except for a small group at the top, they have no vital concern for the welfare of the departments in which they serve.

Those who would deny widespread mediocrity in Government service point to Civil Service as having corrected many of the evils which previously existed. Certainly the situation is better than when politics was the sole factor in obtaining Governent employment. However, Civil Service is only the better of two evils. For it also protects the incompetents in Government service. No employee can be removed, except for the most serious offenses, unless there is no longer need for the agency in which he is employed. Then, chances are, he will be transferred to another agency.

If one is to believe Government employees, favoritism within departments frequently results in promotion of the undeserving. Ability and performance often go for naught. In such an atmosphere, efficiency inevitably suffers. Lack of interest in the work assigned is to be expected.

Department executives are often guilty of increasing personnel to a point where there can be no possible use for them, the reason being that prestige and the salary of the executive correspond to the size of his department. Under these conditions, morale sags, and employees have a sense of frustration. Many become embittered, but go on with their treadmill ways.

Not long ago, your Observer talked to a woman, now with the Government, whom he considered an unusually competent private secretary. She insisted that she no longer knew what it meant to work, that her department was much overstaffed, and there was nothing for many of the employees to do. Even executives were performing tasks that could be done by any clerk. This is an old story to most Washingtonians, but your Observer is still distressed by such reports.

The treatment given by the Government to its employees is, on the whole, very liberal. This is especially true in regard to salaries, even though there has been a great clamor raised that they are inadequate. It is true that in Washington the cost of living is higher than in any other city. However, Government employees, and that includes executives, are on the whole as well compensated as those who are privately employed. Where vacations and sick leaves are concerned, they fare much better.

It has been said that the Government cannot secure the services of able people because it does not pay adequately. That is undoubtedly true in certain instances, but it is not, in your Observer's opinion, generally true. Not only are too many overpaid for what they do, but a large number are not competent enough to obtain private employment which will assure them of the income they are now receiving.

It would be encouraging to report the exodus of a large percentage of Government employees following the War. However, a comparatively small number have been released, and many new ones have come to take their places. The Government payroll is still tremendous. The Republicans have made a great to-do about cutting down on the number of Government employees, but they have not done much better than the Democrats.

It is high time that efficiency and sound administration be required in all Government departments, and that needless and incompetent employees be dispensed with. Will anything be done along this line? Politics being what it is, it is doubtful. Mediocrity will no doubt continue to flourish in Washington until voters will no longer tolerate it. That may be a long time in coming.

In the meantime, physicians of this country may well be worried about what will happen to them if a Government system of medicine becomes a reality and the bureaucrats take over.

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The Malpractice Situation

The increase in the number of malpractice suits in the District of Columbia, the large sums sought by complainants in these suits, and the inadequate liability insurance carried by many physicians have been the source of growing concern to Medical Society officials. Taking cognizance of this, the Society's Executive Board, at its meeting on November 24, 1947, instructed its Secretary to communicate with secretaries and executive secretaries of all state medical societies for the purpose of ascertaining what steps had been taken to improve the malpractice situation in their jurisdictions. Response to the Secretary's letter was immediate, replies being received from forty of the forty-eight states. The data supplied revealed that many medical societies had been successful in coping with problems in this field.

The questions asked in the Secretary's communication were: Will you kindly let me know what has been done by your association about malpractice coverage for its members? Is there a group malpractice insurance policy in effect in your state? Have you a committee on malpractice insurance? If so, what are its duties? In what ways do you assist members who are being sued for malpractice? Do you limit your aid to those who, you are satisfied, have a just cause?

Replies indicate that there is a wide variation in insurance coverage. Less than half the state medical societies or their component units have endorsed group malpractice policies. A majority have been content to leave the purchase of insurance to physicians themselves. However, a substantial majority have established committees to defend members sued for malpractice. It is evident that these committees vary considerably in effectiveness. Some have been dormant for many years. Demands on quite a few have been slight.

There are medical organizations, such as the Connecticut State Medical Society, in which each county unit has a committee to deal with malpractice problems. According to Dr. Creighton Barker, Secretary of the Society, these committees are most effective, working closely with the Society's legal counsel and the insurance company writing the group malpractice insurance. He says, "No case is settled without trial. Plaintiff's judgments are rare in Connecticut. If I were asked to name a single public service which the Society renders to its members, I would place this group professional liability coverage as the most important."

Among the states which have adopted effective programs are Colorado, Indiana, Kansas, Minnesota and Washington. There are, of course, others, but these seem to your Observer to be outstanding. Some state medical societies have been reluctant to become active in this field because of the action taken some years ago by the Ohio Bar Association, which objected to the efforts of the Ohio State Medical Society to protect its members. The Bar Association charged the Society with the unauthorized practice of law. However, many medical societies apparently never heard of this incident or ignored it.

Not a few state medical societies have so-called medical defense funds. A portion of the membership dues are usually allocated to the fund. Rules governing the administration of these funds are fairly uniform and are usually incorporated in the organization's by-laws.

There has been a tendency in naming the committees dealing with malpractice problems to avoid implications that they have been organized solely to defend physicians in the event of litigation. One medical organization designated such a committee its Judicial Board.

Insurance rates for malpractice coverage vary considerably. This is not surprising, but it does suggest the desirability of further investigation to ascertain whether the rates in Washington are reasonable.

All information gathered in this survey is now in the hands of the Executive Board. What it will do with it is, of course, not certain. However, your Observer hazards the guess that it will create a committee whose function it will be to develop a program to cope more adequately with the malpractice problems in the District of Columbia.

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Masters or Servants?

Readers of this column will recall that your Observer has previously aired his views on the AMA's House of Delegates. His most recent contribution on this subject—"Democracy in Action"—appeared in the February number of the MEDICAL ANNALS. In it he had something to say about executive sessions of the House. He argued that there was no justification for excluding members of the American Medical Association and officers of state and county medical societies. (He would now like to include in this group officials at the Association headquarters.) These observations attracted wider attention than anticipated. However, no objection, so far as your Observer knows, has been raised to them, nor has anyone challenged their accuracy.

Since his criticism of executive sessions, the House has held another meeting. Your Observer was present as usual. When the matter of an executive session came before the House, an attempt was again made to include those connected in some official capacity with state or county medical societies. The House vacillated but finally agreed that the state secretaries should remain. Before this action was taken, the meeting room was cleared. Among those who were required to leave were three angry officials of a large Midwestern state medical society. In the group were the president of the state society, the chairman of its council, and its executive secretary. They vehemently insisted that they would take this matter to their state society membership. They saw no reason for their exclusion, because they said they had far more to do with the policies of their organization than their delegates to the House. A showdown was promised.

Your Observer was sympathetic, but having become accustomed to the House's erratic behavior in this matter, had long since concluded that until physicians from the "grass roots" refuse to tolerate its arbitrary action, there will be no change in policy. Only when those who elect the delegates make themselves heard will "secret" sessions of the House be abandoned.

It is your Observer's hope that the irate Midwestern state medical society officials will really stir things up when they get home. Why shouldn't they? Here is the titular head of an organization, spokesman for it, and the choice of the membership to guide its destinies, being refused admittance to the deliberations of the national organization's policy-making body when issues of vital importance to those whom he represents are being discussed. The chairman of the council is in about the same situation. He, too, is an important figure in a state medical society, having a considerable part in formulating policies. By its arbitrary action, the House may, through him, alienate the support of his organization. No one has more intimate knowledge of a state medical society or more to do with the conduct of its affairs than the executive secretary, be he physician or layman. It doesn't make good sense to exclude him either.

Certainly the position taken by the House is shortsighted. It has created resentment where there should be good will. Those who have been affronted are not outsiders; they are very much on the inside. To treat them as potentially untrustworthy is offensive and tends to destroy unity.

Delegates may well remember that, like all officials of medical organizations, they are servants, not masters. If they forget that, they are due for a rude awakening.

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Medicine's Dilemma

As scientists, one would think that physicians would, in all professional matters, be objective and not given to emotionalism. But mention "socialized medicine" to the average physician and you stir his deepest feelings. Often he is unable to define what he means by "socialized medicine." Usually he thinks it is a system under which he will be employed by the Federal Government; that at the very least, he will be subject to the whims and red tape of bureaucrats in Washington. To him, there is no neutral position in this matter; you are either for or against a Government system of medical care. Public officials who temporize evoke his wrath as much as out-and-out proponents. Conversely, those who unreservedly oppose the infiltration of bureaucracy in medicine rate highly in his estimation.

The current political campaign finds physicians in a serious dilemma, because in both major parties there is a candidate for high office who actively supported compulsory sickness insurance legislation. Both of them deny that what they propose is "socialized medicine." But that does not allay the fears of wary physicians. President Truman, now seeking reëlection, and Governor Earl Warren of California, Vice Presidential candidate on the Republican ticket, are political bedfellows in the view of a large segment of the medical profession. The best the worried physicians can do under the circumstances is to pin their hopes on Thomas E. Dewey, trusting that if elected President, he will keep his Vice President in line.

Early in the campaign, Governor Dewey addressed the House of Delegates of the Oregon State Medical Society. On that occasion he said, "Compulsory socialized medicine is no good. It cannot be done. Accordingly, I have spent the last two years of my life knocking down every proposal that anybody has made to regiment the medical profession and the people of America through any program of socialized medicine."

Naturally, these sentiments were greeted with approval by the Oregon medical professon. At about the same time, Governor Warren was interviewed by Nat S. Finney for *Look* magazine. He made it clear that he still is a staunch advocate of compulsory sickness insurance. It might be noted in passing that Governor Warren accepted the Vice Presidential nomination on the condition that he would play an important role in the new administration. He did not propose to be a nonentity.

Will Governor Dewey remain unaffected by the views of his running mate? Which way will angry physicians turn in their dilemma should he alter his position? That, of course, remains to be seen, but here is a suggestion. The medical profession must proceed promptly with the development of a national health program which adequately meets the needs of the people. That is urgent. Emotions must be relegated to the background. There has been too much heat generated already for the medical profession's own good. The behavior of some physicians in this respect has bordered on the ludicrous. For example, appearances at Congressional hearings have frequently been made by Ph.D.'s employed by the Government. They invariably testify for bills opposed by a majority of the medical profession. Those who favor arguments of the Government Ph.D.'s address them as "Doctor," but supporters of medical organizations pointedly call them "Mister." However, when the physicians or their representatives speak of Ph.D.'s employed by medical organizations, or others favoring their position, they invariably refer to them as "Doctor." This is of little importance except that it reveals how prejudiced and emotional medical men have become.

It is time physicians make a scientific approach to "socialized medicine." They should ask themselves: What points in the proposals made by proponents of compulsory sickness insurance are objectionable? Why? What are our unmet medical needs? How should they be met? Are our present plans adequate?

Until these questions are realistically dealt with, the medical profession's position will, to say the least, be vulnerable.

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Common Sense in Public Relations

It is to be hoped that common sense will soon prevail in medical public relations. Enthusiasm for elaborate programs has for some time been getting out of hand. Symptomatic of the feverish activity in this field has been the deluge of descriptive folders, newsletters and reports received daily in the offices of medical societies. In reading this material, one is impressed with the unbounded faith of a large number of physicians in the expensive devices of public relations experts to curry public favor. Unfortunately, these devices alone cannot achieve what physicians hope for. The net result may very well be decidedly unpleasant if not embarrassing to them.

What Roland W. Waterson, Executive Secretary of the Alameda County Medical Society, Oakland, California, recently said on this subject makes good sense in the opinion of your Observer. In an address before the Association of American Physicians and Surgeons, at Colorado Springs, Mr. Waterson said, "Let's debunk the attractive idea that there is a shortcut to good public relations. You can't take an easy road by hiring a relations expert to have your relations with people for you. It just can't be done.

> "How, for example, are doctor-patient relations improved by the employed 'relations expert' whose propaganda message is read by any one of the millions of people who have been the economic victims of doctors who leave the complexities of the financial aspect of medicine to untrained secretaries and greedy bill collectors?
>
> "Of what value is the expert's soft, compelling radio voice when it oozes into homes of people who have been impoverished by excessive medical fees?
>
> "What kind of result can your 'relations expert' get when his words reach any one of the many millions of Americans who have been soured on medicine through their contacts with any one of the scores of patient-relations mistakes that are made each day in nearly every doctor's office?"

Failure under such conditions is inevitable, Mr. Waterson asserted. While public relations experts can be of assistance, "the actual improvement of these [doctor-patient] relations can be achieved only by the individual practitioners of medicine."

In summing up his views, he made the following points:

> "1. There is no 'public mind.' *People* have opinions; the *public* doesn't. Mass treatment is not only ineffectual; it is dangerous.
>
> 2. Employed experts can't have relations with people *for* you. Nothing on earth can make people like you while you are doing things they dislike. The profession can get help to learn what to do to build satisfactory relations, but doctors themselves will have to do the building.
>
> 3. Organized medicine didn't acquire bad public relations just because it was organized medicine. It has public disfavor because it represents all of the doctors with whom individuals have had bad relations—and there are more of them than you think.
>
> 4. Public Relations and Publicity are no more synonymous than are scientific medicine and physiotherapy. You can no more cure every public relations ill with publicity than you can cure every human ailment with physiotherapy.
>
> 5. There are two parties to a strained and unsatisfactory relationship. Medicine needs to put its own house in order before it can make permanent changes in the public thinking."

Your Observer heartily agrees with Mr. Waterson. Unfortunately, there are still too many physicians who believe that if the press and radio are used to "sell" people on the virtues of the medical profession, public relations will be improved. As Mr. Waterson has so well stated, sound medical public relations are built on deeds, not words. It is what physicians do as individuals and what medical organizations have to offer in the way of concrete evidence that they have the interests of the people at heart, that determine their standing with the public.

Are We Sincere?

Dr. Paul R. Hawley, formerly Major General in the Army Medical Corps, later Chief Medical Officer of the Veterans Administration, and now Chief Executive Officer of the Blue Shield Commission, is no diplomat. He says what he thinks, and is apparently not too concerned where the chips fall. Dr. Hawley was in his usual form—except for a gravelly, rather feeble voice due to laryngitis—when he addressed the Conference of Presidents and Other Officers of State Medical Societies last June on "Blue Cross or Compulsory Government Insurance." Obviously disturbed by bickering within the medical profession over the form which the nation-wide organization of medical prepayment plans should take, he warned his listeners of the consequences of disunity.

> "The dangers that threaten the free practice of medicine in this country," Dr. Hawley said, "are fast becoming critical, and still we delay in uniting in decisive action to meet them.
>
> "We waste precious time in quarreling among ourselves over petty questions of local sovereignty. We amuse ourselves by setting up fantastic straw men, and dissipate our energies in knocking them down, while our enemies have been uniting against us in one national effort. We have thus far done no more than fight a series of rear-guard actions with small unorganized and uncoördinated groups. I know of no more certain road to disastrous defeat.
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> "Our national leaders seem to be purposefully blind to the social changes that are taking place. It is impossible to halt a movement by merely refusing to recognize its existence; and this movement toward extending the benefits of adequate medical care to all of our citizens has already gained too much momentum to be halted by any means. The last hope of American medicine lies in abandoning our present position in the rear of the column, where we have been holding back, and establishing ourselves firmly in the forefront, where we can guide and direct the movement into paths that are the best for our people as well as best for our profession...."
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> "...If the medical profession does not at once assume the leadership, if it does not at once cease its double talk and double dealing with the voluntary non-profit prepayment plans, and throw its influence squarely and honestly behind these plans, we are going to have compulsory Government health insurance in this country within three years."

Critics hastened to chide Dr. Hawley for what they considered his ill-advised remarks. However, there were those, of whom your Observer was one, who felt that Dr. Hawley was justified in challenging the sincerity of physicians with respect to prepaid medicine. There has been evidence that too many physicians are giving lip service to plans sponsored by their organizations. If this impression is correct, something must be done to convince them that medical society prepayment plans are no gesture but a serious attempt to solve a medico-social problem.

Dr. Hawley, in your Observer's opinion, is right when he says if we fail with voluntary plans now, the medical profession will never have another opportunity. Whether physicians like it or not, something must be done about sickness costs, for there is no denying that they have increased to a point where they are prohibitive for persons of moderate income. This is not the fault of physicians, but is largely due to the rapid progress of medical science. Refinements in hospitalization, nursing, and laboratory procedures are major items in the mounting costs of sickness. The fact that doctors' bills are reasonable does not alter the fact that the over-all costs to patients of ordinary means are more than they can bear.

In this situation, the physician is obligated to do his part in finding a solution. Prepayment plans, it now appears, are the best means of spreading medical costs. They should be given every opportunity to succeed. This requires a wholehearted, sincere effort on the part of the medical profession.

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Legal Aid Bureau

It is generally recognized that physicians give more generously of their professional skill to the less fortunate members of society than any other group. With few exceptions, private practitioners provide medical care to the indigent or semi-indigent in hospitals, clinics, homes, and offices without compensation. Other professional groups are not afforded the opportunity of rendering a comparable public service. However, there are several which make splendid contributions to the community's welfare.

In a recent report on the Legal Aid Bureau of the District of Columbia, Allan Fisher, the Bureau's Director, says, "The analogy between organized legal aid and free medical service to indigent persons has been expressed many times without losing flavor through repetition. The common feature is the relief from mental distress that is given to the worried client or patient.

> "For example, some time ago, a physically disabled client urgently appealed to the Bureau for help in preventing the eviction of his family and himself from an apartment. His rent was in arrears. The Bureau's staff attorney ascertained that this client had already appeared in court several times on account of defaults in rent. Apparently the trouble was due to frequent loss of jobs because of physical inability to perform required duties. Before the legal aid attorney closed that case, he had succeeded in obtaining a postponement of judgment for possession of the rented premises and then, with the coöperation of another social agency, had secured the kind of employment for the client that he could retain. Thereafter the client proceeded under his own power to take care of his responsibilities."

Mr. Fisher presents the following analysis of some 4,315 cases which were dealt with by the Bureau in 1947: there were 783 disputes arising out of contractual relations, 387 having to do with real estate matters. By far the largest number had to do with family problems affecting marriage, separation and divorce with incidental claims for support of wives and children.

"These last figures," Mr. Fisher says, "are especially significant, since an upward swing of domestic relations cases foreshadows expanding social and legal problems among the low income family groups of this District."

The Bureau is supported by the Community Chest of Washington. Mr. Fisher has been endeavoring during the past year to promote the establishment of legal aid organizations in localities in nearby Montgomery and Prince Georges Counties in Maryland and Arlington County in Virginia.

The Bureau had a paid staff of eleven attorneys last year, besides the assistance of nine attorneys who gave their services without compensation. Legal assistance was also given by student bodies of local law schools. Mr. Fisher, the Director, devotes only part time to the Bureau's activities, the only full-time worker being the Administrative Assistant.

Your Observer is pleased to direct his readers' attention to this worthwhile project.

T. W.

THE PHYSICIAN'S SECRETARY AND MEDICAL SERVICE

Inasmuch as Medical Service has enrolled over 60,000 subscribers since its inception, April 1, 1948, with the enrollment increasing each day, this seems an appropriate time to call the attention of the physicians of Washington to the important part which their secretaries can play in making Medical Service work with a minimum of friction and with the maximum of good public relations for themselves. This can be effected easily if each secretary thoroughly understands the basic principles of the Medical Service Plan and will follow the few simple procedures necessary to its operation.

She must know that single patients earning less than $2,500 a year or families earning less than $4,500 a year are eligible for service benefits, and that you have signed an agreement to furnish the services covered by the plan for the fees set forth in the Fee Schedule to subscribers whose incomes are within those limits. She will then be in a position to assist your patients with their financial responsibility for your services.

The secretary should ask each patient, at the time she is securing other information, whether he is a participant in Medical Service and ask for identification if the answer is yes. The secretary should also ascertain if the patient's income is in the bracket which entitles him to full coverage under the plan or if in a higher bracket, which would entitle the physician to make an additional charge.

The secretary must understand that benefits under MEDICAL SERVICE are payable only for the services listed in the "Surgical Service Certificate" and that the patient must be admitted to an approved hospital to qualify for benefits under MEDICAL SERVICE.

It is also very important that the "Physician's Service Report" be completely and accurately prepared and forwarded promptly after service is rendered so that MEDICAL SERVICE may know its liabilities and make prompt payment to physicians.

It is our sincere wish not to impose any unavoidable burdens on subscribers or participating physicians in the Plan, and if participating physicians will instruct their receptionists and secretaries in the details of the Plan, we believe there will be little difficulty in its operation.

MEDICAL SERVICE OF THE
DISTRICT OF COLUMBIA

FRANK D. COSTENBADER, M.D.
President
A. C. GRAY, M.D.
Medical Advisor

BOOK REVIEWS

War, Politics, and Insanity. C. S. BLUEMEL, M.A., M.D., F.A.C.P., M.R.C.S. (Eng.) Price, $2.00. Pp. 121. Denver, Colo.: World Press, Inc., 1948.

Perhaps it is just as well that most physicians will have no time to spend in reading Dr. Bluemel's book on "War, Politics, and Insanity."

Patently obsessed by the idea that those persons whose ethics are based on religious concepts are suffering from obsessions, dangerously veering close to the idea that the only practicable democracy is one governed not by the people but by the master-minded few, fumbling for concise definitions through inadequate descriptions of incidents, burdened by a case-history style whose short sentences too often fail to achieve the clean-cut incisiveness of logical clarity, the author, in this work, reveals unfortunate lacunae in his historical, literary, and philosophical background. Chapter references and an index do not lift the book from the abyss of mediocrity.

Thus, an interesting enough thesis (with which most people would agree), that "one of the cardinal causes of war . . . is the fact that national leadership frequently falls to men of abnormal mental makeup" (p. 12), is still open for scholarly study and discussion.

ELIZABETH J. BARHAM

Minor Surgery, 6th ed. FREDERICK CHRISTOPHER, B.S., M.D., F.A.C.S., Associate Professor of Surgery, Northwestern University Medical School; Chief Surgeon, Evanston (Illinois) Hospital. Price, $12.00. Pp. 1058, with 937 illustrations on 595 figures. Philadelphia: Saunders, 1948.

Again with the sixth edition of his book on minor surgery, Dr. Christopher supplies a most important instrument for the use of all physicians who may be confronted with surgical problems.

In this volume the pathogenesis, diagnosis and treatment of those conditions which make up the large majority of surgical affections are well considered. The entire volume has been thoroughly revised and new sections added as necessary for the discussions of the use of antibiotics, pulmonary embolism, burns, shock, hypoproteinemia, refrigeration anesthesia, and lumbar sympathetic block in thrombophlebitis. The material contained in this volume is based on Dr. Christopher's 30 years' experience in outpatient department and hospital practice. The bibliography is most complete.

This book is deemed essential to the medical library of physicians and medical students.

PAUL C. KIERNAN, M.D.

The American Illustrated Medical Dictionary, 21st ed. W. A. NEWMAN DORLAND, A.M., M.D., F.A.C.S., Lt. Colonel, M.R.C., U. S. Army; member of the Committee on Nomenclature and Classification of Diseases of the American Medical Association; Editor of "American Pocket Medical Dictionary," with the collaboration of E. C. L. MILLER, M.D., Medical College of Virginia. Price, $8.00; with thumb index, $8.50. Pp. 1660, with 880 illustrations. Philadelphia: Saunders, 1947.

Dorland's new edition is welcomed by writers in the field of medicine who have needed an up-to-date reference source for checking medical terminology which increased so rapidly in volume during the War and postwar years. Included are numerous additions in the specialties of tropical medicine, aviation medicine, medical zoology and mycology, biochemistry and pharmacology, and physics and nucleonics. It has indices to the 233 portraits reproduced and to tables "including important headings where large numbers of correlated facts are

(Continued on page 546)

Washington Physicians of Yesterday

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XXXIX. ROBERT REYBURN, M.D., A.M.

Strong adherence to unpopular convictions and militant participation in controversial movements made the career of Dr. Robert Reyburn stand out in the annals of the Medical Society of the District of Columbia.

Born August 1, 1833, in Glasgow, Scotland, Dr. Reyburn was brought by his widowed mother to Philadelphia in 1843. He received the degree of M.D. from the Philadelphia College of Medicine and Surgery in 1856, and of A.M. from Howard University in 1871. He practiced medicine in Philadelphia until 1862, when he entered the military service. He was a surgeon in the United States Army from 1862 to 1867, when he was mustered out as Brevet Lieutenant Colonel of the United States Volunteers. After President Lincoln's assassination he was one of the guard over the body, and made an examination of the fatal wound.

After his military service Dr. Reyburn practiced medicine and surgery in Washington for the remainder of his life.

The most noteworthy feature of Dr. Reyburn's life was his active and devoted participation in movements for the aid of the emancipated colored race. The agency first established after the close of the Civil War for this purpose was the Freedmen's Bureau; with this Dr. Reyburn was connected throughout its existence, 1865–72, being its Chief Medical Officer 1871–72. He was the Surgeon in charge of Freedmen's Hospital, 1867–75; and except for a brief interval he was connected with the Howard University Medical School from its organization in 1868 until his death, in various teaching capacities and as Dean, 1902–09.

(*Continued on page 546*)

MEDICAL MALPRACTICE SUITS: THEIR EXTENT, CAUSE AND PREVENTION*

H. Mason Welch

Legal Counsel for the United States Fidelity and Guaranty Company

It is common knowledge that malpractice claims practically cover the entire field of medical and surgical treatments. Few practitioners of medicine may feel secure against claims or law suits. It is true that certain areas of specialization offer more hazards than others but it would be difficult to determine that any given field of practice is more liable than others to malpractice claims and suits.

The medical practitioner must recognize that the general public today is definitely claim-conscious and in the larger cities and centers of population, medical malpractice claims and law suits are perhaps as common as any other type of litigation,—not so numerous, of course, as automobile accident litigation, but in fact no more unusual or noteworthy. In all of the larger cities and in this jurisdiction, there is veritably a grist of malpractice claims and law suits.

It is the purpose of this article to deal solely with medical malpractice in civil cases as distinguished from criminal malpractice.

Every physician and surgeon should see to it that he is covered and protected by substantial and adequate liability insurance and thenceforth be ever on the alert against carelessly doing and saying things to encourage or provoke a claim against himself or a fellow practitioner.

Frequently the idea of making a claim, or the basis for a claim, is implanted in the patient's mind by a careless and thoughtless remark or comment. The remark or comment may be of impetuous criticism, self-puffing, or deliberately disparaging. Over the years, in the many cases which have been in our office, we have found numerous instances of each character of comment. It would be impossible to list many things that may or may not be said, but frequently we have found that patients become aroused and relentlessly pursue a malpractice claim because of a careless or malicious comment. It is wise to be cautious and guarded in commenting to one's patient. Always be particularly so with reference to treatment administered by some other physican or surgeon.

Frequently patients become dissatisfied and upset because the care and attention of one physican does not seem to produce the desired results as quickly or completely as the patient anticipates, and the patient may make a bona fide change expecting that a change of physican and treatment may produce benefical results. In this type of situation there is seldom any thought of a malpractice claim or law suit. If the ordinary standards of professional courtesy are followed and the succeeding physican and his predecessor exchange fair and frank views about the condition of the patient's previous treatment and progress, bearing in mind not only the primary welfare of the patient but also the rights of the practitioner and the hazards of even careful professional practice, trouble will seldom arise. In this respect the specialist should particularly bear in mind that his entire viewpoint and picture of the case is entirely different from that of the general practitioner.

In discussing these problems, I have frequently warned the general practitioner against continuing treatment of stubborn conditions without taking counsel and consultation with a specialist, or at least a more experienced practitioner. Error of judgment in the choice of approved treatments or procedure is excusable and does not constitute a basis of malpractice liability. Error in the choice of a treatment or procedure or the failure of successively attempted approved treatments and procedures does not spell out liability in a malpractice claim; but one must bear in mind the difference between successively trying approved treatments and procedures and stubbornly persisting in the treatment of a disease or condition which continues progressively worse. The safe and sane decision is to take consultation with a more experienced practitioner or a specialist, and if honest judgment so indicates, relinquish the case. This course may slightly reduce income but it certainly should build up integrity and good will and oftentimes avoid troublesome, tedious and expensive litigation.

It has often occurred to me, and I have repeatedly pointed out, that specialization is attended with some evils as well as good. I confess that I am utterly unqualified to discuss whether medicine should become more specialized. Neither do I for a moment undertake to establish a maximum field of endeavor for the general practitioner. Strictly from the lawyer's viewpoint I wish to emphasize the fact that medicine has developed so many special fields of practice that it has imposed upon itself many legal burdens, obligations and restrictions.

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* The third lecture in the Orientation Course for new members of the Society, April 17, 1948. This article was written for the Medical Annals from notes used on that occasion since the lecture was given extemporaneously.

The basic rule is, "The general practitioner is not held to the same degree of skill in treating a patient as the specialist." For one to follow this rule to the exclusion of other rules and principles will lead to much serious difficulty. The borderline between different specialties and specialties and general practice is at times so close or overlapping that considerable care and judgment must be exercised. There is sometimes a borderland between general practice and specialization which apparently offers many quagmires to the general practitioner. I have frequently heard specialists say, "He shouldn't have done that. We don't treat those cases that way anymore." It is all right for the specialist to make such a comment to another physican but it is devastating to say such a thing to a patient. While the specialist in a particular field may treat differently than the general practitioner, the latter's treatment may be an approved method, and it would be much better for the specialist simply to say, "We will try something else." There seems to be a non-bridged span between the customary practice and procedures of the general practitioner and the specialist which should be fairly and carefully considered by both, so that the transition of the patient from one to the other will not be fraught with danger for the general practitioner. Particularly in these situations careless comment and thoughtless criticism should be avoided. As an illustration, all fractured bones do not come directly to the attention of a specialist. In some places, indeed, an orthopedic surgeon may not be available within many miles. The general practitioner must exercise not only his best skill, knowledge and judgment in treating fractures, but he must also recognize his own limitations and the developing dictates of approved practice in bone surgery. Whether we like it or not, in the larger cities and areas of dense population the specialists are many and their standards tend to become the accepted standards of practice. The general practitioner might be perfectly safe in doing the best that he could in the care and treatment of bad fractures in a rural area without seeking the help of a distant specialist, whereas, in the same type of case in a community like the District of Columbia, the general practitioner would be compelled, in the exercise of good care and judgment, to see to it that the patient received the services of the more skillful and experienced specialist.

The obligation on the physican in every instance is that he bring to bear his best skill, judgment and experience in treating a patient according to approved and customary standards of practice in his community. There are also obligations on the patient; particularly, the patient is bound to follow and comply with the instructions and advice of the physican. Disgruntled patients who fail to follow out instructions or fail to return for timely treatment, to their own detriment, often seek the advice and treatment of other physicans. They are frequently untruthful and seek to excuse themselves and blame their first doctor. I most vigorously urge the utmost care and circumspection in talking over the treatment of any patient who comes from another physican without reference and consultation. My advice would be never talk, just listen. Always insist, if at all possible, on a conference with the previous physican and understand your fellow practitioner's side of the case before advising the patient or administering any treatment. There may be instances where it will be impossible to delay treatment, but there can be no instance that requires advice, discussion or comment with a flavor disparaging your predecessor. One should be particularly guarded about answering any questions concerning the predecessor's treatment unless the entire history of the case is known, including the predecessor's viewpoint and explanation of his procedures and the case as he found it.

Bear in mind, we are not advocating refusal to fairly, equitably, and justly discuss the case in its entirety, but we insist that it should be only discussed and commented upon fairly and justly, taking into consideration the disparities between special fields of practice, specialties and general practice, and with a full knowledge of the physican's viewpoint and record as well as the patient's.

Claims are provoked frequently against general practitioners and specialists in various fields because of alleged refusal to continue to treat a patient or refusal to see or visit the patient at the patient's whim or demand. These situations can become distressingly troublesome if the physican thoughtlessly and heedlessly permits his conduct to be governed by anger or fails to properly protect himself in determining to discontinue the treatment of a case. Generally speaking, a physican is not required to treat a case or continue treatment of a case against his own willingness or desire; however, there are some limitations upon this rule and one should always be cognizant of them. If a physician determines to discontinue treatment of a patient, it is well to make that decision known in plain, unmistakable language either to the patient or the person responsible for the care and welfare of the patient, and to urge and recommend that other medical care and attention be immediately obtained and that he be informed of the name of the new physician. It is to be preferred that there be some discussion between the two physicians and an understanding. If this procedure is impossible and a relationship between physician and patient has become strained and unpleasant, it would not be amiss to put the patient on notice in writing or verbally in the presence of some dependable person as a witness. In hospitalized cases, the situation may be very easily governed by having a responsible hospital officer or attendant present when the patient is informed of the physician's decision and the hospital put on notice as a matter of record so that there can be no valid contention that the patient is abandoned.

We find that medical malpractice cases arise with various combinations of defendants—a single physician, several physicians, one or more physicians and a hospital, physicians and druggists, hospitals, hospitals and staff members, and in almost every conceivable combination of persons and institutions having to do with the treatment and care of disabled, diseased, and ill members of the community. They are based upon alleged acts of commission and omission. It behooves one to be as careful and diligent to do what is necessary as to be careful and skillful and diligent in the doing of it.

Assuming that most medical practitioners carry professional liability insurance, let us consider briefly what should be done if one recognizes that trouble is brewing, or claim has been presented. Everyone has a perfect right to defend and protect himself. Physicians should first see to it that the record is straight and sufficiently complete to give one a fair picture of the case, its treatments, and any high-lighting incidents. Immediately report the first intimation of demand or claim to your insurers and coöperate completely to best serve the ends calculated to protect your own interests. Many physicians and surgeons unfortunately think that to be insured relieves them of every and all responsibility in the negotiation and handling of their claim. The fact is that the physician is under exactly the same personal responsibility to coöperate to protect his own best interests with the insurance company's representative that he would be if not insured and forced to retain private counsel. There is nothing magical about being insured. It should be a mighty comfortable feeling, but it can do nothing to change the routine handling of the claim or law suit. Exactly the same things need to be done by the same people in the same way as though no insurance policy existed. Many, many times in the past twenty-five years I have had insurance brokers, doctors and dentists tell us that the doctor didn't expect to be bothered, disturbed or annoyed in the handling of a malpractice claim, or that he was insured and expected the case to be settled and disposed of without annoyance to him. That is utterly impossible. The best interests of all concerned can be best served by a complete and willing coöperation. Usually insurance representatives and counsel do much more than the insurance contract requires or calls for to alleviate burden or annoyance to the assured. Experience in handling many cases involving all kinds and classes of people has fortified the insurance company's personnel and counsel with certain knowledge and information about claimants and claims-conscious people which indicates or dictates a preferable manner of handling a claim or settlement. Frequently their suggestions may bring about an amicable settlement and avoid litigation. Oftentimes the best results can be obtained toward compromise and friendly adjustment by keeping the insurance adjuster or lawyer in the background. In some instances it is preferable that the claimant know almost from the beginning that there is to be no compromise or that the limits of compromise adjustment are definitely set and that the matter is entirely in the hands of the insurance company and its counsel. Usually the physician's best interest will be attained by willing coöperation with the requests or suggestions of the insurance adjuster or insurance counsel.

Many cases are compromised and settled for nominal amounts which might be successfully fought and defended. There seems to be a prevailing thought that such is the better practice to follow. Certainly it saves much in the way of time, effort and annoyance to the various physicians who might be called upon to testify as expert defense witnesses and to the counsel who would be called upon to prepare and conduct the defense. In the long run it may even save money. However, it has always been the writer's opinion that medical malpractice claims and suits should be considered strictly on their merit, and that it is better for the profession as a whole to vigorously and wholeheartedly contest unmerited claims even though it demands much greater effort on the part of the persons involved and may frequently cost more to defend an unmerited claim than it could be settled for.

The insurance company, its employees, representatives and counsel, must be governed by exactly the same motives and desires as the defendant physicians in order to make the handling of physicians' and surgeons' liability insurance at all a profitable and sound underwriting experience. Without complete coöperation on the part of the assureds and the companies, the ultimate end of satisfactory economical protection for the physician against the hazards of malpractice claims cannot possibly be attained.

Frequently questions have been asked with reference to the rights of a physician called upon to give expert medical testimony. Generally the rule is that physicians are not required any more than experts in any other line of endeavor or vocation to give expert testimony against their own desires or without suitable arrangements for compensation. If one has not treated or consulted in connection with a case, no demand can be made requiring the physician to give testimony as an expert witness against his will and without satisfactory arrangements for compensation. However, there is a qualification to the rule in those instances in which the physician asked to give an expert opinion has treated the patient. The physician can be required by subpoena to testify factually concerning all elements of such a case. Inasmuch as treatment requires the exercise of expert judgment and opinion, diagnosis, and to some extent prognosis, the physician can be required to extend his testimony into those fields not because he is present as an expert in the general sense but because his complete testimony concerning the patient whom he has treated necessitates the expression of opinion both in the way of diagnosis and prognosis. It is futile to quarrel with the processes of the Court in litigated matters which involve as part of the established case medical treatment and medical opinions. Oftentimes counsel in a given case, or the litigant, may be entirely unreasonable and fail or refuse to coöperate to save a physician's time. It is believed that most lawyers will coöperate if the physician expresses a willingness to comply with the reasonable requirements of the case and solicits the coöperation of the attorney to avoid wasting time and effort. The Courts generally are interesting themselves in just this question, and it is unlikely that any physician will find himself required under subpoena to needlessly waste hours of time in the courthouse. If counsel in the case will not coöperate, usually the physician may appear in response to subpoena, make known to the Court his needs and desires, and he will usually be met with complete understanding and coöperation. The Courts fully realize that it is unfair and unjust to put a practicing physician under subpoena and keep him in the courthouse for hours or maybe days waiting to be called as a witness. The writer has never been involved in any trial where the physician was required to come to Court under subpoena and just hang around. I have never known, personally, of an instance where the Court failed to recognize that the time of a medical practitioner was not entirely his own, that the needs of other patients must be considered, and that the only thing required was the presence of the doctor in Court for a sufficient period of time to take his testimony. Most Courts will permit the interruption of the taking of testimony of any other witness so as to enable a physician at the courthouse to testify and leave immediately.

The matter of expert testimony is sometimes troublesome in connection with the defense of medical malpractice claims because on the witness stand some doctors seem to take a different viewpoint and attitude than in the ordinary course of practice. They become more guarded, less free and positive in expressing opinions, and tend frequently to weaken their true and honest medical opinion by some saving expression to the effect that "maybe so" or "might be" or "anything may happen in medicine" or "nobody can be positive." It has always been the writer's conception that a true and definite medical opinion needed no apology or qualification.

The defense of medical malpractice cases is ninety per cent in the hands of practicing physicians. We believe that all practitioners should be willing to consider the facts and circumstances of any case brought against a fellow physician and express an honest opinion on the various questions which may be raised. The insurance company's attorneys, or private counsel in other cases, can only prepare an intelligent handling and defense of any malpractice claim by having the full coöperation of the defendant doctor or doctors involved.

To revert to the matter of reporting claims and to tie it in with the matter of defense expert testimony, I wish to point out that reports should be sufficiently comprehensive to cover the case as entirely and completely as necessary to enable the expression of an expert opinion. Frequently the complete details and facts are only uncovered after several conferences and much investigation. There is a tendency, only natural perhaps, to entirely eliminate or lightly touch those phases of a case which may be considered unfavorable. They should, of course, be explained with the greatest care and detail. Defense counsel should not learn the most important facts and circumstances from his opponent. In making a written report of the circumstances of a case, the physician should put in clear, simple, narrative form all of the details which have a bearing upon the claimant's demands and conditions, and he should be particularly frank and clear in relating all incidents which may be subject to question or criticism.

We are frequently asked the extent of the so-called rule of confidential communications. Actually we have never seen a case against a physician based entirely upon the charge of violation of the confidential communication rule. Physicians should keep in mind their obligation with respect to the confidences of their patients; however, it is our experience that physicians very seldom fail in this respect and frequently are slightly overzealous, if that be possible, to avoid violating the rule. Generally speaking, only the patient may release the physician from the bond of confidential communications. The patient frequently does exactly that, however, by bringing action involving the condition for which the physician rendered aid and treatment. In most of those cases the question will arise in Court where the patient is protected by the services of counsel and the presence of the presiding judge A very simple rule to follow is to refuse to discuss the case and the patient or refuse to disclose or exhibit records without first having the express consent of the patient. This question seldom presents itself in connection with medical malpractice claims. If the patient for one reason or another makes a claim against a physician, he has the right, in self defense, of fully disclosing, discussing and explaining everything in connection with the case and its treatment to those who are properly interested in the handling or defense of the case out of Court as well as in Court.

We have had experience with malpractice claims and suits based on alleged unauthorized treatment. These cases usually arise in the field of surgery and are frequently of serious import. This type of claim may arise quite innocently if considered solely from the viewpoint of developments confronting a surgeon during the course of operation; however, there is much more to be considered than simply that phase of the problem in most cases.

The physician should always completely inform the patient or person responsible for the patient of the general nature and character of the operation to be done and reasonably anticipated difficulties or complications. If it be a case where a definite diagnosis is not possible and exploratory procedures are indicated, these circumstances should be made clear and the various possibilities and necessities explained. The written consent for the surgical procedures should not be hurriedly and sketchily prepared. It is just as easy to make it comprehensive so as to fully protect the physician. If organs are to be removed, or the necessity of amputation may develop, or any other serious complication may be reasonably anticipated, these circumstances should be fairly explained in the written or printed form of consent.

In dealing with children of immature years, special care should be exercised to see to it that the parents or guardian know and understand instructions for care and treatment and the administration of medicine and drugs. Even in dealing with minors at any age level, it should be borne in mind that except in the strictest sort of emergency, consent of the parents or guardian is necessary for surgical treatment.

We have frequently spoken of and discussed the importance of maintaining complete and accurate office records and memoranda, including X-ray pictures, X-ray reports, and reports of pathologic studies, chemical analyses, etc. This matter can hardly be overstressed. The physician and his office staff cannot be expected to remember in detail the circumstances and important factors in each patient's case. If important instructions as to home care and treatment or otherwise are given from time to time during the course of a patient's case, a brief memorandum should be recorded so that if need arises at some future time, the time and circumstances of certain changes and developments in the patient's case may be readily and accurately recovered for consideration without relying solely upon various degrees of personal recollection. Sound, complete, informative records are often the very basis and most important evidence in the trial defense of the medical malpractice lawsuit.

When unfortunate incidents occur in the course of hospital treatment at any time during the patient's stay in the hospital, the attending physician should insist that the hospital record include the nature and circumstances and the treatment given. Surprising as it may seem, we have had many cases where the patient claimed burns or injuries of various types occurred during hospitalization and that he received some treatment or attention from the hospital staff. Inspection disclosed no mention whatever of the occurrences or the treatment on the hospital record, the patient's physician had much less than an accurate recollection of the circumstances, and we were left with little, if anything, to contest and defeat the patient's allegations. Usually, on the other hand, the patient would have from one to three or four witnesses, members of the family and friends who visited at the hospital. Strangely enough, the recollection of these witnesses and the troublesome patient always blend quite uniformly as to facts and conversation held by them at the hospital. If the hospital record in these instances noted clearly and plainly what happened, who discovered it, who administered treatment, and what treatment was given, the defendant physician's predicament would be measurably alleviated.

It is needless to say that members of the hospital staff should be alert and eager to coöperate with the attending physician in all cases, because frequently the hospital and members of its staff are made joint defendants by the dissatisfied patient.

There is much more to be said concerning the matter of medical malpractice claims and law suits. I have only touched some of the important points, but trust that the material will serve somewhat to guide the busy practitioner and encourage further inquiry among the younger members of the profession.

MEETINGS

Monday, Tuesday, Wednesday, September 27, 28 and 29

19th Annual Scientific Assembly

See program elsewhere in this issue.

Wednesday, October 13

Panel Discussion on Renal Calculi

William P. Herbst, M.D., *Moderator*

Participating in the panel will be Hilbert S. Sabin, M.D., Urologist; Harold J. Jeghers, M.D., Internist; Leonard T. Peterson, M.D., Orthopedist; Laurence H. Kyle, M.D., Internist.

Wednesday, October 27

Panel Discussion on Nontubercular Findings in the Washington Chest X-ray Survey

Arthor C. Christie, M.D., *Moderator*

John W. Trenis, M.D., and Clayton B. Ethridge, M.D., will present the subject matter for discussion.

News and Personals

The American College of Physicians announces the following postgraduate courses during the months October-December:

- INTERNAL MEDICINE—University of Michigan Medical School, Ann Arbor, Dr. C. C. Sturgis, Director; October 18–29; fees, $60 for members, $120 for non-members.
- ENDOCRINOLOGY—University of Illinois College of Medicine, Chicago, Dr. W. O. Thompson, Director; November 1–6; fees, $30 for members, $60 for non-members.
- RECENT ADVANCES IN THE DIAGNOSIS AND TREATMENT OF CARDIOVASCULAR DISEASE—Massachusetts General Hospital, Boston, Drs. Paul D. White, Howard B. Sprague and Edward F. Bland, Directors; November 15–24; fees, $45 for members, $90 for non-members.
- CARDIOVASCULAR DISEASE—Emory University School of Medicine, Atlanta, Dr. R. Bruce Logue, Director; December 6–11; fees, $30 for members, $60 for non-members.
- GASTROENTEROLOGY—Graduate Hospital of the University of Pennsylvania, Philadelphia, Dr. H. L. Bockus, Director; December 6–11; fees, $30 for members, $60 for non-members.

The American Board of Neurological Surgery will hold oral examinations in Chicago, June 1949. Applications must be filed by January 1949. Communications should be addressed to the Secretary of the Board, Dr. W. J. German, 310 Cedar Street, New Haven, Conn.

The Council on Postgraduate Medical Education of the American College of Chest Physicians is sponsoring a week's postgraduate course in New York, November 8–12, at the Hotel New Yorker. The latest developments in the treatment of diseases of the chest will be discussed. Tuition fee for the course is $50, with registration open to all physicians but limited in number to 50. Application should be made through the Executive Offices of the American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Ill.

The Southern Medical Association, which meets in Miami, Florida, October 25–28, has selected Dinner Key (the former Pan American Air Depot) as general headquarters for registration, sectional meetings, scientific and technical exhibits, and motion pictures. Dinner Key is ten minutes' ride from the general hotel headquarters. Hotel reservations should be made immediately through the Hotel Committee, SMA Meeting, ℅ City of Miami Convention Bureau, 320 North East 5th Street, Miami 32, Fla. Further announcement regarding the meeting will be found on page xxxiii of this issue of the ANNALS.

Veterans Administration has immediate openings for at least 100 young doctors interested in taking residency training in psychiatry or neurology, or both. Applicants for residency training in these fields must be citizens of the United States, graduates of a School of Medicine approved by VA and the Council on Medical Education and Hospitals of the AMA, and must have completed an internship acceptable to VA. In general, these residencies cover a three-year program of specialty training, although one- and two-year programs also are available at most of the hospitals. Information and application forms may be secured by writing to the Chief Medical Director, Veterans Administration, Washington 25, D. C.

Early in August the **National Heart Institute,** created by Congress in the National Heart Act, was established. The National Heart Act, approved by President Truman, June 16, authorizes the Public Health Service to develop a broad attack upon cardiovascular diseases, now the leading cause of death in the United States. The program will include research, financial aid to outside institutions for research and training of professional personnel, fellowships for individual scientists, and grants-in-aid and technical assistance to the states for heart disease control services.

Dr. Cassius J. Van Slyke was appointed by Surgeon General Scheele of PHS as Director of the Heart Institute, under the general supervision of Assistant Surgeon R. E. Dyer, Director of the National Institute of Health, where the Heart Institute will have its headquarters.

Dr. Van Slyke received his medical degree from the University of Minnesota in 1928, and entered the

Public Health Service in the same year. In 1945 he was placed in charge of the research grants-in-aid and fellowships program of the National Institute of Health.

An aniseikonia clinic has been established in the Eye Department of **George Washington University Hospital.** Facilities are available for the patient to have the frames measured and fitted in the hospital. Dr. Ernest Sheppard, Professor of Ophthalmology of the School of Medicine and Director of the Clinic, states that the iseikonic lenses will be made according to prescription at the Southbridge plant of the American Optical Company. Patients will be seen by appointment only. Arrangements for appointment can be made by writing to Miss Margaret W. Boudren, Secretary, Eye Department, George Washington University Hospital.

The United States Public Health Service celebrated its Sesquicentennial Anniversary with a banquet in the Presidential Ballroom of the Hotel Statler, July 17. A congratulatory letter from President Truman was read to the 700 guests who attended the dinner. Principal speakers were Mr. Oscar R. Ewing, Federal Security Administrator, and Dr. Leonard A. Scheele, Surgeon General of the Public Health Service.

One hundred and fifty years ago, on July 16, 1798, President John Adams signed the Congressional Act which created the Marine Hospital Service for "sick and disabled seamen." By 1912 the Marine Hospital service had so broadened its scope of health protection that Congress changed its name to United States Public Health Service.

Dr. Thomas Parran and Dr. Hugh S. Cumming, past Surgeon Generals of PHS, received special recognition. Dr. C. L. Williams, Sr. and Mr. Daniel Masterson were among those honored for their many years of service to PHS, which numbered 40 and 45 years, respectively.

The Friendship Lions Club is offering free use of a ceiling projection machine with sixty films to those chronic invalids who are unable because of their disability to read without aid. The machine will be set up in the home and can be operated easily by the patient. Two new wheelchairs are also available upon a physician's prescription.

Because of the limited number of equipment, it is contemplated that their use be limited to those living in the Friendship (Tenleytown) area. However, this restriction will not necessarily be adhered to in all cases. Requests should be made to the President of the Lions Club, Mr. T. C. O'Keefe, telephone Ordway 1122, Ext. 223, or Michigan 6623; or to the Secretary, Mr. Louis O. Boltz, Woodley 7800 or Wisconsin 1163.

A cancer detection clinic, sponsored by the Garfield Ladies' Aid Society and supported by the American Cancer Society, was opened at **Garfield Memorial Hospital,** July 27. Dr. Ralph M. Caulk, attending radiologist of the Hospital, is Medical Director of the Clinic.

The clinic is equipped to examine 40 patients a day and will be open on Tuesdays, Wednesdays and Fridays.

A clinic for the diagnosis and treatment of tumors will open in September and will use the facilities of the cancer detection clinic. The tumor clinic was begun in 1933 as a joint effort of the Warwick Clinic and Garfield Hospital. The arrangement continued until recently, when the Warwick Clinic became affiliated with George Washington University and moved to the old Hospital building. It has been proposed that the tumor clinic be open on Mondays and Thursdays.

The International Congress on Mental Health, which convened in London, August 11–21, was attended by the following delegation from the United States, appointed by the Secretary of State: Dr. Winfred Overholser, Superintendent of St. Elizabeths Hospital, Chairman; Dr. Robert Felix, Medical Director of the Mental Hygiene Division, Public Health Service; Dr. Martha Eliot, Associate Chief of the Children's Bureau; Miss Ruth Addams, specialist in community nursing, Consultants Division, Army Medical Department; Captain Frederick L. McDaniels, Chief of the Professional Division, Navy Bureau of Medicine and Surgery; Miss Mary E. Switzer, Assistant to the Administrator, Federal Security Agency; and Dr. Harvey J. Tompkins, Chief of the Neuropsychiatry Division, Veterans Administration.

Following the Congress Dr. Overholser will spend two months in Europe visiting psychiatric centers and studying mental health programs in most of the countries of Western Europe.

Dr. Daniel Blain, Medical Director of the American Psychiatric Association, who attended the meetings of the World Health Organization in Geneva in July, was invited to address the Mental Health Congress on "Advances in Group Therapy."

Dr. Brian Blades resigned his position as Chief of the George Washington University Surgical Service at **Gallinger Municipal Hospital,** July 1, in order to devote full time to the Surgical Department of the new Hospital. His position at Gallinger has been filled by **Dr. J. Blaine Harrell,** Assistant Professor of Clinical Surgery at George Washington.

Dr. Blades, who received his medical degree from Washington University School of Medicine (St. Louis) in 1932, has been Professor of Surgery at George Washington since 1946. During World War II he was Chief of Thoracic Surgery at Walter Reed General Hospital and consultant to the Surgeon General of the Army. He served in the Medical Corps of the Army from 1942 to 1946 and was discharged as Colonel.

Dr. Harrell, who graduated from George Washington University School of Medicine in 1936, has been on the teaching staff of the University's Department of Surgery since 1941. Both Drs. Blades and Harrell are diplomates of the American Board of Surgery.

Dr. William Calhoun Stirling presented a paper on "Rupture of the Kidney" before the recent meeting of the American Urological Association in Boston, Mass. He has also been invited to address the North Central Branch of the American Urological Association in Des Moines, Iowa, in October. His subject will be "Discussion of Tumors of the Bladder."

Dr. Stirling was recently appointed civilian consultant in urology to Walter Reed General Hospital by Surgeon General of the Army Bliss.

Dr. Daniel F. Lynch, an Associate member of the District Medical Society, was inducted into fellowship in the Royal College of Surgeons at ceremonies in London, July 29. Dr. Lynch, an alumnus of the University of Maryland School of Dentistry, was one of three American dentists so honored.

Rear Admiral Morton D. Willcutts assumed command of the **National Naval Medical Center** at Bethesda, July 26, succeeding **Rear Admiral Thomas Anderson,** who has held the post for the past two years.

During the War Admiral Willcutts served at the Naval Hospital, San Diego, in varying capacities, including medical officer in command and as fleet medical officer of the Fifth Fleet. Admiral Anderson will receive assignment with the Medical Division of the National Security Resources Board.

Mr. Arthur H. Kruse, of Akron, Ohio, has been selected Executive Director of the **United Community Services of Washington,** which is the new, central welfare organization replacing both the Community Chest of Washington and the Washington Council of Social Agencies. Mr. Kruse has been Director of the Akron Council of Social Agencies and solicitor training director for the Akron Community Chest for the past four years.

Miss Shelby W. Patton, Director of the School of Nursing and Nursing Service at **Garfield Memorial Hospital,** retired August 1 after a career in nursing which began at Garfield 30 years ago, when she enrolled as a student nurse in 1918. In 1922, a year following her graduation, she was named head nurse and night supervisor, a position she retained until 1927, when she became Assistant Director of Nursing. She had held her appointment as Director since 1944.

In 1942 Miss Patton completed a course in nursing education at Catholic University; she is a member of the American Nurses' Association, the Graduate Nurses' Association and the League of Nursing Education. Miss Patton plans to return to her home at Huntsville, Alabama.

Dr. S. Ross Taggart, Director of the District Health Department's Bureau of Venereal Diseases, participated in a radio forum on "Education and Control of Gonorrhea," July 18. The program marked the beginning of a year-long campaign directed toward the elimination of gonorrhea in Washington. Assisting the Health Department in the campaign will be the Public Health Service and the Medical Society of the District of Columbia.

Dr. Karl Menninger, trustee and a director of the Education Department of the Menninger Foundation at Topeka, has resigned as manager of the **Veterans Admimistration Hospital** at Topeka to become chairman of the Dean's Committee and senior consultant to the hospital.

Dr. Frank Casey has succeeded Dr. Menninger as manager of the Topeka Veterans Hospital. Dr. Casey will be remembered by many Washington physicians. He graduated from George Washington University School of Medicine in 1931 and served his internship at St. Elizabeths Hospital. He also took residency training in psychiatry at St. Elizabeths Hospital.

Dr. Charles Stanley White, Jr., who has returned from Cleveland, Ohio, after completing a fellowship in surgery at the Cleveland Clinic, will be associated with his father, Dr. Charles S. White, and Dr. E C. Wilson in the practice of general surgery, as of September 1. Dr. White, Jr., served in the Army Air Force for three years.

Dr. Winfred Overholser addressed the Sunday morning congregation at All Souls' Unitarian Church, July 25, on "Sanity Amid World Confusion." Dr. Overholser recently retired as moderator of the American Unitarian Association, having served for two years.

Dr. Everett J. Gordon was recently elected to honorary membership in the Peruvian Society of Orthopedics and Traumatology.

Dr. Arthur A. Morris was elected President of the Neurosurgical Society of America at its meeting in Chicago in June.

MEMBERSHIP

The following applicants for membership were duly elected to membership at the meeting of the Executive Board, July 26, 1948, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

Active Members

Morris H. Rosenberg, 1355 Peabody Street, N.W.
Charles Daniel Scheuch, 4406 15th Street, N.W.
Donald R. Sickler, 5741 Lambeth Road, Bethesda, Md.
Robert B. Sullivan, 1945 Calvert Street, N.W.
William N. Thomas, Jr., 4000 Cathedral Avenue, N.W.

Associate Member

Cyrus H. Maxwell, U. S. Office of Education

Recent changes in membership status:

Reinstated to Active

Herman Kabat

Active to Associate

William L. Harris
Charles G. Hoyt
Thomas F. McMahon
George I. Mishtowt

Resigned
Active

Robert E. James
John C. Ransmeier

Associate

Herman E. Hilleboe

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have been received for review:

Medical Writing, The Technic and Art, 2nd ed. MORRIS FISHBEIN, M.D., Editor, *The Journal of the American Medical Association*, with the assistance of JEWEL F. WHELAN, Assistant to the Editor. Price, $4.00. Pp. 292, with 36 illustrations. Philadelphia: Blakiston, 1948.

Manual of Veterinary Bacteriology, 5th ed. RAYMOND A. KELSER, D.V.M., A.M., PH.D., Brigadier General, United States Army, Retired; Professor of Bacteriology and Dean of the Faculty School of Veterinary Medicine, University of Pennsylvania, Philadelphia, AND HARRY W. SCHOENING, V.M.D., In Charge, Pathological Division, Bureau of Animal Industry, U. S. Department of Agriculture, Washington, D. C. Price, $6.50. Pp. 767. Baltimore: Williams & Wilkins, 1948.

General Endocrinology. C. DONNELL TURNER, PH.D., Associate Professor of Zoology at Northwestern University. Price, $6.75. Pp. 604, with 164 figures. Philadelphia: Saunders, 1948.

Practice of Allergy, 2nd ed. Warren T. Vaughan, M.D., Richmond, Virginia; revised by J. Harvey Black, M.D., Dallas, Texas. Price, $15.00. Pp. 1132, with 333 illustrations. St. Louis; Mosby, 1948.

TALIAFERRO CLARK, A.B., M.D.

CAT.

(1867–1948)

Dr. Taliaferro Clark, retired Assistant Surgeon General of the United States Public Health Service, died July 3 at the United States Marine Hospital, New York City, where he had been a patient since 1945.

Dr. Clark was born at The Plains, Fauquier County, Virginia, on May 14, 1867, the son of Dr. Edwin Parsons Clark and Mrs. Judith Ann Taliaferro Clark, both of Orange County, Va. He was a direct descendant of Sir Alexander Spottswood, Colonial Governor of Virginia, and Colonel Lawrence Taliaferro, first colonel of the Fauquier and Culpeper Minutemen. His family also listed among its ancestry such names as Augustine Washington, William Clark, the explorer, and General George Rogers Clark.

He received his A.B. degree from Emory and Henry College, Va., and his degree in medicine from the University of Virginia, at Charlottesville, in 1890. He practiced in Washington before joining the Public Health Service and during that time was a member of the Medical Association of the District of Columbia, having been elected to membership in 1893. His career with the PHS extended over a period of 36 years, 1897 to 1933, when he retired as Assistant Surgeon General and chief of the Public Health Service.

Dr. Clark held many public appointments during his lifetime. He was director of the Child Hygiene Investigation in 1915; director of the Bureau of Sanitary Service for the American Red Cross from 1917 to 1919; in supervisory charge of the Public Health Service immigration, quarantine and related services in the British Isles and Continental Europe from 1926 to 1929; a member of the International Sanitation Conference in Paris in 1926; and a delegate to the International Conference on Tropical Medicine at Cairo, Egypt, in 1928. He also was a member of the Office International d'Hygiene Publique and consultant in health to the Julius Rosenwald Fund.

Dr. Clark was one of the pioneers in identifying endemic goiter with the iodine content of soils and water. He is also credited with bringing the venereal disease problem to public attention. One of the early workers in the field of mental tests, he worked on the standardization of such tests.

His wife, Mrs. Margaret Wolforth Clark, died in 1940. Surviving are a daughter, Mrs. Charles L. Moncure, of Orange, Va.; and five sons: William T., of Washington; Charles E., of Darnestown, Md.; Richard H., of Bethesda, Md.; Fitzhugh T., of Gaithersburg, Md.; and David S., of Maracaibo, Venezuela.

Cranioplasty with Tantalum—Fulcher

(Continued from page 492)

44. Pudenz, R. H., and Odom, G. L.: Surgery, 1942, **12,** 318.
45. Conley, J. J.: Arch. Otolaryng., 1944, **40,** 295.
46. Hemberger, A. J., Whitcomb, B. B., and Woodhall, B.: J. Neurosurg., 1945, **2,** 21.
47. Echols, D. H., and Colclough, J. A.: Surgery, 1945, **17,** 304.
48. Mayfield, F. H., and Levitch, L. A.: Am. J. Surg., 1945, **67,** 319.
49. Harris, M. H., and Woodhall, B.: Surgery, 1945, **17,** 422.
50. Gardner, W. J.: Surg., Gynec. & Obst., 1945, **80,** 303.
51. Woodhall, B., and Spurling, R. J.: Ann. Surg., 1945, **121,** 649.
52. Bakody, J. T.: Ohio State M. J., 1946, **42,** 29.
53. Voris, H. C.: S. Clin. North America, 1946, **26,** 33.

Cancer Care—Klopp

(Continued from page 510)

most important reason for the existence of a cancer service. Again it must be stressed that a cancer service does not imply that all cancer is treated by any one individual, but it does imply that cancer as a disease is treated primarily by those who will be able to see sufficient numbers of cases to develop better methods of diagnosis and treatment.

The cancer service within the hospital is the best means by which certain groups can gain access to adequate numbers of patients and become really cognizant of the systemic nature of the disease. This improves education facilities for medical students, interns, residents, and physicians in postgraduate training.

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2. Pack, G. T., and Gallo, J. S.: Culpability for delay in treatment of cancer. Am. J. Cancer, 1938, **33**, 443.
3. De Lawter, D. E.: Culpability for delay in management of cancer. M. Ann. District of Columbia, 1948, **17**, 342.
4. Foote, F., to be published.
5. Klopp, C. T.: Cancer prevention or detection clinics. M. Ann. District of Columbia, 1947, **16**, 701.

Book Reviews

(*Continued from page 533*)

grouped." Seven pages are devoted to a table of doses in both apothecaries' and metric systems.

The format is excellent, the type clearcut and easy to read. For quick reference, symbols and abbreviations are in the same alphabetical sequence as the words. Definitions are concise and explicit. This reviewer has used the dictionary constantly since it was received and has found it satisfactory in every respect.

A. L. E.

Washington Physicians of Yesterday—Reyburn

(*Continued from page 534*)

Dr. Reyburn was a member of the Georgetown Board of Council 1865; President of the District of Columbia Board of Health 1870–71; and member of the Washington Board of School Trustees 1877–79. He served as Consulting Surgeon of Providence and Freedmen's Hospitals; and in Georgetown University Medical School was Professor of Clinical Surgery 1866–67, and of Anatomy 1867–68. He was (naturally) an ardent Republican, Delegate to the National Nominating Convention of 1904, and member of the Republican National Committee 1904–08.

He joined the Medical Association and the Medical Society of the District of Columbia in 1867, but was soon afterward engaged in a most violent controversy against these organizations, arising from their failure to admit colored physicians as members. Racial feeling ran high at that time; and under the leadership of Dr. Reyburn a slate of delegates representing the colored element was proposed for the meeting of the American Medical Association in 1870, in opposition to the regular slate from the District Medical Society and Association. The meeting of 1871 was held in San Francisco, with only one District delegate in attendance; but in 1872 the turbulent issue came to a head and was settled by the American Medical Association decisively rejecting Dr. Reyburn's slate and accepting the regular list. This was one of the bitterest controversies in the history of the District medical organizations. In pique Dr. Reyburn in 1870 dropped his membership in the District Medical Association and Society; but in 1873 he renewed his membership in the Society and thereafter continued as an active and honored member thereof, gaining, as expressed by action of the Society, the respect, esteem and confidence of the medical profession and the community. He had frequent committee assignments in the Society, and was its Vice President in 1876 and 1894.

Dr. Reyburn was also a member and officer of many other local and national societies, including the presidency of the American Therapeutic Society in 1907. In 1881 he was one of the six well-paid surgeons who attended President Garfield in the latter's fatal wounding; and in 1894 he published a 108-page history of the case. He made numerous contributions to medical periodicals; and in 1907 he published an autobiographical sketch of his fifty years in practice. He was memorialized in "Who's Who in America."

On March 25, 1909, Dr. Reyburn died, after long illness. The Medical Society took occasion to express its regret at the loss of a valuable member, a public-spirited citizen, a surgeon and physician of repute, a man of literary attainments, and an army medical officer of creditable record.

John B. Nichols, M.D.

GOOD NEWS FOR GOLFERS!

The 8th Annual Physicians' Golf Tournament will be held at the Kenwood Golf and Country Club on Wednesday, October 6, 1948. Tickets, $6.00—covers dinner and green fees.

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THE PRACTICAL USE OF CLINICAL ELECTROENCEPHALOGRAPHY (EEG)

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Washington

FOR many years excellent diagnostic methods have been available to the medical practitioner for investigating diseases of the nervous system. The pneumoencephalogram, the myelogram, and the arteriogram are notable examples. However, such methods depend almost entirely upon demonstration of actual physical changes in structure. It is a recognized but often neglected fact that abnormal neurophysiologic changes are manifest in the nervous system before actual changes in structure can be demonstrated by these methods. It is evident in this early phase of abnormal function that irreversibility of nervous tissues becomes established. It is most important to arrest the abnormal physiologic stage of disease and to avoid the pathologic stage which is often permanent. If an accurate measure of abnormal neurophysiologic change could be made, neurologic diagnoses might be advanced to the stage wherein many diseases would be prevented and many would be reversed. The use of the electroencephalogram (EEG) has proved effective somewhat in achieving this ideal.

Berger[1] demonstrated electrical potentials arising from the brain. Today these potentials are recorded by the electroencephalogram (EEG), which consists of electrodes applied to the area to be investigated, an amplifier employing vacuum tubes, and a recording device. The potentials vary largely between 5 to 100 millionths of a volt when taken by electrodes placed on the scalp. This is the amplitude. The frequency of normal brain waves is resolved into 3 major classes: (a) the alpha frequency, which oscillates about 10 per second, is most easily obtainable from the occipital lobe area; (b) the beta frequency, which oscillates at 20 to 25 per second, is most easily obtainable from the frontal area; and (c) the gamma frequency, whose waves oscillate between 25 and 50 per second. Slightly faster frequencies have been described, but in our present state of knowledge the importance of these is not well known. The form or pattern of normal brain waves is largely dependent upon location and related conditions. Thus, with the eyes closed, a pattern consisting chiefly of alpha waves may appear from the occipital area and is considered in some way related to the visual apparatus.

From the foregoing analysis it is obvious that the technical set-up must be highly perfected to make conclusions based upon the variability of amplitude, frequency, and pattern after an amplification of 20 million times. It must be realized that many conclusions in the early clinical literature on this subject are not based upon brain waves at all. The recording and transmission of television is a highly accurate science based upon standard electrical principles which cannot be violated, and likewise, in the recording of the electroencephalogram these principles cannot be varied. Only by means of a basic understanding of the electrical problem can one obtain a true electroencephalogram.

Definite abnormal wave patterns have been described and associated with specific disorders so that when these patterns are truly obtained certain conclusions are made. Some of these will be discussed in detail, with the latest opinions on interpretations.

VALUE OF ELECTROENCEPHALOGRAPHY IN GENERAL PRACTICE

Diagnosis of Convulsive States and Questionable Epileptic Variants.—To the practicing physician the contribution of the electroencephalogram as a diagnostic aid in those patients complaining of seizures is one of its uses, if not the most important, in clinical medicine.[2] At least 1 person in 200 in the United States (0.5 per cent of the general population, or 75,000 persons in the Washington vicinity) has or has been subject to recurrent seizures. It is generally accepted that 80 to 90 per cent of unselected adult epileptics will present abnormal electroencephalograms (fig. 1).[3, 4, 5, 6] Furthermore, this percentage can be increased by such technics as the use of sleep records,[7] water and pitressin[8, 9] and alcoholic hydration,[9] and slow intravenous administration of metrazol.[10] These electroencephalograms are sufficiently characteristic to make the diagnosis of epilepsy and its type.

Minor head injuries produce very transient changes in the electroencephalogram.[11, 12] In severe head injury there is frequently a gradual improvement up to 2 years after the injury. If the patient suffers from posttraumatic epilepsy the improvement of the electroencephalogram is negligible over a comparable period of time.[13, 14]

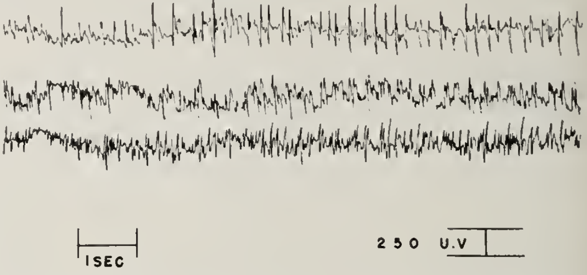

FIG. 1. The electrical discharges from the left hemisphere in a subject with status epilepticus. Note the extremely high amplitude and frequency of the spike discharges.

The relationship of the electroencephalogram to posttraumatic epilepsy is of the greatest importance in detecting the epileptogenic focus (fig. 2). Furthermore, it acts as a guide in the surgical removal of epileptogenic areas.[9, 14, 15, 16, 17, 18, 19, 20] In addition, the electroencephalogram is of considerable value to the neurologic surgeon who studies the epileptic cortex during operation while attempting to cure epilepsy.[9, 18, 19, 21] Latent posttraumatic epileptogenic foci can be discovered by the use of small amounts of intravenous metrazol.[10, 22, 23]

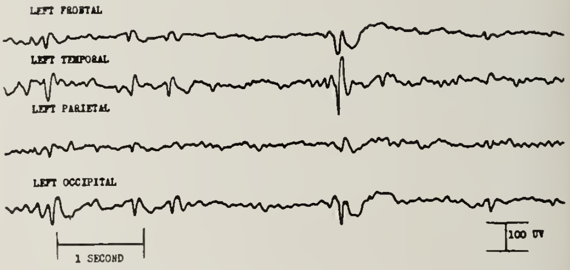

FIG. 2. An example of a focal spike abnormality in a patient with posttraumatic epilepsy. Note the maximal discharge from the left temporal area with some transmission anteriorly and posteriorly.

Diagnosis of Hypoglycemic States.—Strauss and Wechsler[24] point out that the electroencephalogram may be used to help establish the presence of a borderline blood sugar value in lesser hypoglycemic states in which the symptoms are uncharacteristic. The symptoms may be fatigue, headache, dizziness, irritability, restlessness, and a host of minor neuropsychiatric manifestations, many of which are grouped under the psychoneuroses. The development of delta activity on hyperventilation and in the fasting state suggests the diagnosis of hypoglycemia.

Diagnosis and Treatment of Symptoms without Somatic Causes.—Complaints such as "fainting spells" or "blackout spells" present a difficult clinical and therapeutic problem. Hypersensitive carotid sinus, epilepsy, hysterical reactions, and hypoglycemic states are but a few of the causes. In a study of a large number of patients with fainting spells it was found that some revealed an abnormal electroencephalogram.[25] Those with an abnormal record responded to anticonvulsant medications.[25] Patients with a true carotid-sinus syncope show a diffuse slowing of the brain waves during the period of unconsciousness.[26] Consequently, it is highly probable that the patient who has a "fainting attack" during the electroencephalographic examination and whose record fails to show any change may be suffering from an hysterical reaction.[27]

In a group of 21 patients suffering from paroxysmal attacks of dizziness and/or headaches, behavior or somatic aberrations, and psychoneurotic symptoms, an abnormal electroencephalogram was shown in every case.[28] Nineteen of these patients responded to psychotherapy and anticonvulsant medication. Patients with symptoms divisible into the following groups may show abnormal electroencephalograms: (a) attacks of dizziness and/or moderate or severe headaches, (b) attacks of unreasonable anger, cruelty, or assaultive behavior, and (c) abdominal discomfort with no known somatic etiology.[29]

In cases of migraine focal electroencephalographic abnormalities can be recorded during the period of scotoma.[30] This finding is evidence in favor of localized vasospasm.[31] The visual aura of migraine suppresses the alpha rhythm, which later returns while the headaches persist.[32]

Prognostic Value in Head Injury.—A patient with a recent injury and with a normal electroencephalogram or with a slight deviation from normal will, as a rule, recover rapidly and without surgical intervention provided the alpha rhythm is preserved. Patients with skull fractures are much more likely to show persistent electroencephalographic abnormalities.[33] A normal or mildly abnormal electroencephalogram within the first few days after injury nearly always indicates an excellent prognosis. The persistence of severe electroencephalographic abnormalities during the first 10 days after injury gives a more accurate prognostic indication of delayed recovery and posttraumatic sequelae than does the clinical estimate alone.[33] A patient with an old injury and with abnormal electroencephalographic tracings after coma presents a serious problem. Serial electroencephalograms following injury are advisable. In children an injury will cause more deviation from normal than in adults with equivalent injury. Considerable deviations at the levels of the frontal lobes do not always imply irreversible change. In cases in which the deviation has been prolonged, treatment for epilepsy offers further improvement. The electroencephalogram can reveal the existence of severe trauma in the past and of a persisting cerebral lesion, but the absence of electroencephalographic abnormality does not exclude the existence of a cerebral lesion.[34]

Value in the Treatment of Convulsive Problems.—Until recently the use of the electroencephalogram as a therapeutic guide offered little to the practitioner. Lennox[35] has shown that in patients suffering from pyknolepsy, myoclonic epilepsy, and akinetic epilepsy, if the electroencephalogram demonstrates a 3 per second spike and wave pattern, the therapeutic response to tridione is excellent. It was equally important to note that he found that patients with similar clinical seizures did not respond favorably to tridione.

Prediction of Eclampsia.—In the belief that cerebral angiospasm precedes the clinical signs and symptoms of eclampsia workers have studied the electroencephalogram and found it significantly changed in impending eclampsia.[36, 37]

Use in Treatment of Neurosyphilis.—Reversibility of abnormal electroencephalograms in neurosyphilis is indicative of further improvement in cerebral function. The effects of penicillin in the treatment of neurosyphilis can be measured.[38]

VALUE OF ELECTROENCEPHALOGRAPHY IN NEUROLOGY AND PSYCHIATRY

Diagnosis of Organic Psychoses.—The psychoses associated with chronic alcoholism,[39, 40] syphilis,[41] arteriosclerosis and senile brain disease[42] are all accompanied by disturbed cortical discharges which vary directly with the clinical symptoms. If the patient exhibits clinical symptoms of confusion and marked irritability the electroencephalogram is more abnormal.[42] Nevertheless, it is sometimes possible to find a normal resting electroencephalogram in patients with severe mental changes. It is not implied that a normal electroencephalogram makes the psychosis "functional" rather than "organic." It is of practical importance that the purely psychologic disorders (psychoneuroses, hysteria, etc.) generally have electroencephalograms within normal limits.[43] This is true except that in anxiety states one usually encounters abnormally fast or beta activity, especially during hyperventilation. The absence of alpha waves and prominent beta waves has been suggested as diagnostic of cortical degenerative disease (Pick's disease) as compared to slow waves which indicate degeneration of the white matter (Schilder's disease).[44]

Differentiating Hypnotic Trance from Sleep.—The electroencephalogram in hypnotic trance shows no distinctive differences between the cortical electrical activity at the time the hypnotic trance was induced, or during the established hypnotic trance, and in the normal waking state.[45, 46] The hypnotic state is often spoken of as an "artificial sleep" or "sleep-like state." These electroencephalographic data are not in accord with the hypophysis that the hypnotic state is related in any way to sleep.

Prognostic Value in Pre-electroshock.—The few studies of the prognostic value of thee lectroencephalogram in shock therapy fail to show any agreement. Proctor and Goodwin[47] showed that patients with a somewhat slow preshock record failed to show clinical improvement following electroshock. Bagchi et al[48] concluded that patients with the greatest amount of preshock electrographic abnormality profited most from electroshock therapy. Turner et al[49] insisted that none of the patients with abnormal preshock electroencephalograms recovered, whereas one fourth of their patients with normal preshock records did. Moriarty and Siemens[50] observed that the electroencephalograms of recovered patients failed to reveal any significant differences from the records of patients who did not recover. Thus it would seem that with our present knowledge of the electroencephalogram the obvious changes in cerebral physiology registered in the electroencephalogram do not give a direct clue to the mechanism of healing in electric shock therapy. Nevertheless, I would agree with the findings of Weil and Brinegar[51] on the following points: (a) an abnormal preshock electroencephalogram usually indicates that a longer course of treatment is necessary in order to achieve clinical improvement, (b) a highly abnormal electroencephalographic record 14 days after the last treatment is usually found in patients requiring further hospitalization, and (c) a normal preshock electroencephalogram promises a better clinical result from electric shock treatment than an abnormal preshock record. Consequently, if one is aware of the above conclusions, a more accurate consultation and opinion is possible.

Changes with Schizophrenia.—Hoagland et al[52] found an increased incidence of delta waves in schizophrenia. He also showed an inverse relationship between the level of the blood sugar and the incidence of delta waves. Schizophrenics sometimes show a relatively "poor" alpha rhythm, while manic depressives have "good" ones, and this tendency is carried over to nonpsychotic individuals of these personality types.[53] Others[54] have found no differences between normal and schizophrenic subjects.

Development and Mental Deficiency.—It has been shown that the alpha waves uncommonly appear before the age of 2 or 3 months. At 3 months the average frequency is 3.9 per second, at 6 months 4.5 per second, at 9 months 5.8 per second, and at 1 year 6.3 per second. This frequency gradually increases with age until at 8 years approximately normal adult frequency is attained (10 per second). This correlates well with the findings in mental defectives in which the alpha rhythm is slower than normal for mental ages below 5 years and normal above that mental age.[55]

Eugenics and the Advisability of Certain Marriages.—In spite of the fact that epilepsy has been thought to have a hereditary predisposition, it is almost unbelievable to find that the evidence substantiating this view is relatively small.[56] An individual may have an abnormal brain wave pattern without having clinical seizures.[57] This person actually carries a predisposition to epilepsy. The marriage of 2 normal persons who both carry a predisposition to seizures is worse than the union of an epileptic with a person who has no predisposition. A "normal" person who carries a predisposition is as likely to have an epileptic offspring as an out-and-out epileptic.[58] These excellent scientific deductions can only influence the eugenics of epilepsy when mating becomes an intellectual matter and emotions are discarded.[59]

Child Behavior Problem.—Sixty-five per cent of children with behavior disorders had abnormal records (81 per cent of schizophrenics and 55 per cent of the total behavior problems). The most obvious characteristics of the records were generalized dysrhythmia and the appearance of spontaneous bursts of slow wave activity of high voltage.[60, 61] This problem was put to practical use when Walker and Kirkpatrick[62] successfully treated patients with behavior problems who had specific electrical changes with dilantin. None of the children presented clinical evidence of epilepsy or were known relatives of epileptics. The implications and significance of recognition of these cases with the electroencephalogram in terms of prevention or amelioration cannot be overlooked.[62, 63]

Therapeutic Implications in Personality Alterations.—Rockwell and Simons[64] have shown that when a patient has electroencephalographic abnormalities of the type presented by psychopathic patients he must be suspected of having a deficiency in the synthesizing function of his personality. The electroencephalogram is useful in detecting this deficiency and in giving an early lead as to the presence of disturbances of personality organization, since these disturbances are not always obvious during early contacts with the patient.[64] The type of abnormality found in psychopathic individuals with personality changes was a 5 to 7 per second activity of low average amplitude in the frontal and parietal leads.[64, 65] The best single measure of emotional stability is the duration of the dominant alpha frequency.[66]

Value in Medico-legal Disputes.—If the reader is interested in this phase of the problem he should consult an excellent paper by Gibbs.[67]

Aid in Determination of Recovery from Disorders of the Nervous System.—In this category are a host of conditions which can be evaluated as to rate of return to normal function and completeness of reëstablishing normal. There is still a larger group of possibilities. The following is a list of a few established ones: recovery from head injury, encephalitis,[68] bromide intoxication,[69] barbiturate poisoning,[70] delirium tremens,[40] chronic alcoholism,[39, 40] neurosyphilis,[41] cerebrovascular disease,[71] brain tumor, and meningitis.

VALUE OF ELECTROENCEPHALOGRAPHY IN NEUROLOGICAL SURGERY

Intracranial Expanding Lesions.—The amplitude of the alpha waves is the same on the two sides of the head, while in patients with unilateral lesions of the frontal lobe the waves on the affected side are of greater amplitude.[32] In lesions of the parietotemporal regions which destroy the optic radiations, the alpha rhythm remained present on the affected side with the eyes open but disappeared on the unaffected side when the eyes were closed.[32] Abnormally large delta waves are regularly present over areas of cortical dysfunction or disintegration.[72, 73] Seventy per cent of 543 brain tumors were localized by electroencephalography.[74] Thus it can be seen that in questionable localizations by ventriculography the previous knowledge of the electroencephalographic localization is of considerable value in deciding upon the ideal approach to the lesion. Deep-seated and posterior fossa tumors are responsible for the non-localizable tumors.[74] The ability of the electroencephalographer to localize expanding lesions will undoubtedly improve as technics become more refined (basal electrode, etc.) and more standardized.[75] Baudouin[76] suggested that the electroencephalogram may replace cerebral ventriculography in a limited number of cases in which the electrical observation corresponds to the clinical symptoms.

Value during Surgery on the Brain.—Foremost among the values of electroencephalography is its use in isolating preoperative and operative epileptogenic foci.[9, 19, 21] The electroencephalogram during operation on the cerebral cortex for epilepsy is of the greatest importance in serving as a guide in determining epileptogenic foci for removal (personal observation). The developmental patterns in focal epilepsy are known so that the optimal time of operation can be electroencephalographically determined (fig. 3).

Measurement of Recovery Following Head Injury.—This subject has been discussed under "Value of Electroencephalography in General Practice."

Lateralization of Aneurysms.—The use of a three-dimensional system for localization, including a basal lead, has remarkedly increased the accuracy for lateralization of aneurysms.[77, 78]

Bleeding Cerebral Tumor and Subarachnoid Hemorrhage.—Greenstein and Strauss[79] have suggested the use of the electroencephalogram as an aid in the differential diagnosis between a bleeding cerebral tumor and a subarachnoid hemorrhage due to other cause.

Reduction in the Number of Pneumoencephalograms.—In one large clinic the use of the electroencephalogram has reduced the necessity of pneumoencephalography from 56 to 21 per cent of cases (Davidoff).

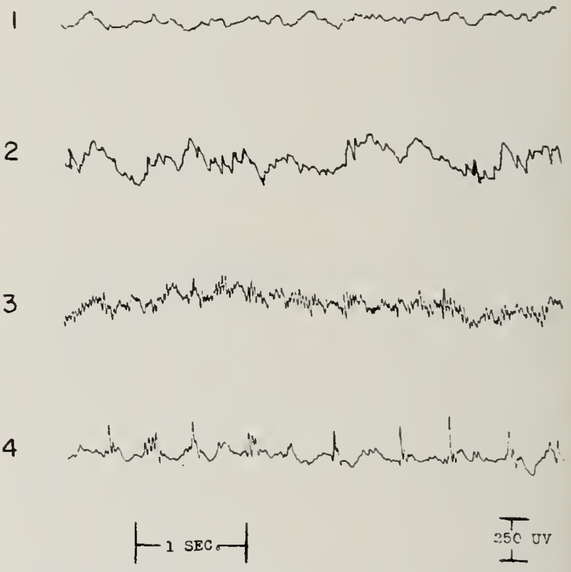

Fig. 3. Sequence showing the development of an epileptogenic lesion in the parietal area:

1. The acute stage 4 weeks following production of the lesion. Note irregular, low-amplitude, random slow waves.

2 and 3. The transitional stage, respectively, 7 and 12 weeks following production of the lesion. Note higher amplitude slow waves, superimposed sharp waves, and high frequency discharges.

4. The chronic stage, 4 months following production of the lesion. Note continued slow-wave activity with interspersed, high-amplitude random spikes.

Use as a Guide in Determining the Optimal Time for Operation in Selected Cases.—The electroencephalogram may function as a guide to determine the optimal time for operative intervention in selected cases of pituitary tumors, oxycephaly, hydrocephalus, epilepsy, ruptured aneurysms, cerebral abscess, cerebral angiomas, cerebral hemorrhage, removal of foreign bodies, suspected tuberculomas, sinus thrombosis, head injuries,

(Continued on page 602)

EXTRAPERITONEAL CESAREAN SECTION (NORTON TYPE)*

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JOSEPH B. SHEFFERY, M.D.
JEAN PAQUIN, M.D.
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SINCE Physick in 1824 first described the extraperitoneal approach to the lower uterine segment there have been a number of operations derived from this principle. We have had experience with several of these technics, and have found the Norton paravesical operation to be the safest, simplest, and most satisfactory.

In recent years the extraperitoneal technic has been reserved for neglected cases, and it has undoubtedly reduced the incidence of Porros, craniotomies, and hazardous vaginal deliveries. It has also lowered fetal and maternal mortality and morbidity. However, the reason these operations have not attained more widespread popularity is the technical difficulty in performing them by the average operator.

We think that the Norton technic, which is no more difficult than a low cervical, will change most obstetricians' attitude in regard to this procedure. There also should be a widening of the scope of indications. In cases in which there is no cephalopelvic disproportion the tendency in the past has been to deliver these patients "from below," regardless of the length of labor. As a result of this teaching many babies are sacrificed who might otherwise be saved, since they cannot survive the "beating" that the long labor demands.

We are all familiar with the occipitoposterior case in which the patient has an uneffaced and undilated cervix, whose membranes rupture early and who goes into a desultory labor. These patients have a tendency to prolonged labor of some 30 or 40 hours and make very slow progress. It has been shown that after 30 hours the fetal mortality is doubled. We feel that about this time a sterile vaginal examination should be done and a decision reached.

Since Norton demonstrated his technic at the meeting of the Washington Gynecological Society in November 1947, we started doing this procedure in infected and potentially infected cases in which section was indicated. We were so impressed with the ease of performance that we broadened its use and have recently performed it on several elective cases.

Besides the lowered morbidity and mortality there are other advantages that must be considered. Evisceration and future intestinal obstruction from adhesions are impossible, and the chances of ileus and peritonitis are remote.

OPERATIVE TECHNIC

Norton has stressed the importance of preoperative hydration, and in cases where there is very little edema intravenous fluids are given liberally. Well hydrated tissues aid in this procedure.

The bladder is filled with 200 c.c. of sterile water from a flask through a retention catheter which is left in place. A left paramedian incision is made, the fascia over the recti incised, and the left rectus muscle retracted laterally. Under this muscle is an area of "chicken fat" yellow tissue just lateral to the distended bladder and medial to the inferior hypogastric vein. It is easily identifiable. From this point until the

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* From the Department of Obstetrics, Providence Hospital, Washington, D. C.

lower uterine segment is exposed, the operation is entirely by blunt dissection.

The index and middle fingers of the operator's hand are inserted in the "chicken fat" area and it is pushed downward and medially under the symphysis. As this is done, a small area of bladder is felt to herniate through, against the operator's fingers. The bladder is now emptied. The herniated area to the left of the bladder is identified, and by blunt dissection the bladder is pushed downward and to the right toward the symphysis, while the prevesical fascia and peritoneum which is contained in one fold is at the same time pushed upward and to the patient's left. As this step is being carried out, the lower uterine segment comes into view in a very small triangular area bounded below by the bladder, above by the fold of prevesical fascia and peritoneum, and laterally by the hypogastric vessels. Blunt dissection is continued in the same manner until sufficient exposure of the lower segment is obtained. Retractors are inserted and traction is made in an oblique direction, the lower segment being pulled down and to the right, displacing the bladder under the symphysis, and the upper being directed upward and to the left, displacing the fascial-peritoneal fold in that direction.

A longitudinal incision is made in the lower segment, Kielland's forceps applied to the baby's head in the routine manner, and delivery effected. After the placenta and membranes are removed, the lower segment is closed with two layers of continuous no. 1 chromic catgut.

The bladder is refilled to test its integrity, it is again deflated, and a rubber tissue drain placed in the retrovesical space and drawn from the lower angle of the incision. The fascia and skin are closed in the usual manner.

Antibiotics and sulfones are used in all potentially infected cases, and transfusions are given when indicated.

For further details of operative technic the reader is referred to Norton's original article in the April 1946 issue of the *American Journal of Obstetrics and Gynecology*.[1]

In 18 cases this technic has been used during the past 7 months.

Indications:

Malpresentation	3
Cephalopelvic disproportion	5
Primary uterine inertia	6
Preëclampsia with previous section	1
Previous Manchester operation	1
Premature separation of placenta	1
Elderly primiparous breech	1

Four of the operations were elective, which disproves the contention that the lower segment must be thinned out before this operation can be performed.

The average length of labor in the remaining 14 cases was 32 hours, the shortest being 12 hours and the longest being 61 hours. It may be significant that in the cases of disproportion the average was 24½ hours, whereas in the inertia cases it was 42 hours.

Status of membranes:

Intact	7
Ruptured	11

(The average duration of rupture was 30 hours.)

There were 3 morbid cases in this series, using the accepted standard of 100.4°F. temperature for any 2 days of the puerperium, excluding the first 24 hours.

The bladder was entered once and the peritoneal cavity 3 times. These were recognized and repaired.

The size of the babies ranged from 3 lbs. 14 oz. to 11 lbs.

The average length of hospital stay was 7 days.

There was no maternal or fetal mortality.

The only postpartem complication was pyelitis in 1 case which occurred on the 4th postpartem day and responded to chemotherapy.

SUMMARY AND CONCLUSIONS

1. Eighteen cases of cesarian section by the Norton paravesical technic are reported with no fetal or maternal mortality.

(Continued on page 603)

BILATERAL SYMPATHETIC DYSTROPHY

Report of a Case*

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SINCE Weir Mitchell[1] in 1872 used the term causalgia to describe a specific syndrome, there has been considerable confusion in the classification of posttraumatic painful states because of the tendency of many clinicians to describe cases of causalgia under different names and, conversely, to classify as causalgia many cases which do not fit the original description. Doupe, Cullen and Chance[2] have restated the characteristics of causalgic pain and have advanced a working hypothesis for the understanding of the role of the sympathetic nervous system in causalgia. The characteristics of this pain are:

1. It is spontaneous.
2. It is hot and "burning," intense, diffuse, and persistent, but subject to exacerbations.
3. It can be excited by stimulation which does not necessarily produce a physical effect on the limb. (Emotional excitement usually aggravates the pain and brings on the paroxysm.)
4. It leads to profound changes in the emotional state of the patient.
5. It is relieved by sympathetic block.

Sudeck,[3] in 1901, described a state of painful atrophy of the bone of an extremity following trauma to that extremity, and since that time many reports of similar cases have appeared in the medical literature. In this posttraumatic painful state, as in true Weir Mitchell causalgia, the role of the sympathetic nervous system has been demonstrated, Leriche and Fontaine[4] indicating the role of sympathectomy in the treatment of this syndrome, as did Fontaine and Herriman.[5]

True osteoporosis of the Sudeck type is characterized by (1) loss of motor function of the extremity, (2) characteristic decalcification in the roentgenograms, (3) the constant coëxistence of vasomotor disturbances, and (4) great pain.[6] However, Sudeck[7] in more recent years has stated that the bony changes originally described by him are not atrophic changes, and that these occur frequently without being accompanied by the pain and vasomotor changes. It is doubtful, therefore, whether the concept of painful posttraumatic atrophy of bone which still bears Sudeck's name is any longer a valuable or worthwhile concept to maintain. There are, however, many posttraumatic painful states that are benefited by sympathectomy but do not fit into the category of true Weir Mitchell causalgia or Sudeck's atrophy. Many of these cases are referred to as minor causalgic states.[8] Allen, Barker and Hines[9] describe persistent vasospasm following injury or operation, and classify some of these cases as posttraumatic Raynaud's phenomenon. Drenckhahn[10] described a syndrome characterized by a painful vasospastic state in the hands of pneumatic-hammer workers, following constant trauma incurred in the use of hand-operated pneumatic hammers. Tyson and Gaynor[11] allude to the common denominator in all of these posttraumatic vasospastic states, and certain it is that many of these syndromes do not deserve to be so specifically categorized. The term reflex dystrophy as suggested by deTakats[12] is an excellent one under which to group the posttraumatic painful states which are accompanied by vasomotor changes and respond to sympathetic block.

In this regard the case of reflex sympathetic dystrophy to be presented is rather unique in two respects: (1) In this patient both lower extremities were affected, and the trauma to each occurred at different times; (2) the motor loss and muscle atrophy of the lower extremities was so marked as to result in paresis of these extremities. Following bilateral lumbar sympathectomy the pain was immediately relieved and the motor power in the lower extremities has been gradually recovered. For these reasons this case report is believed to be of unusual clinical interest.

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* From the U. S. Naval Hospital, Oakland, Calif., where Dr. Cooper served in the Medical Corps of the United States Naval Reserve as Lieutenant (junior grade).

Report of a Case

A 40-year-old white male veteran of World War II was admitted to the U. S. Naval Hospital, Oakland, California on November 10, 1947 complaining of inability to stand or walk for the previous month because of weakness of his lower extremities. He had been in good health until February, 1943, when, while serving overseas in the U. S. Army, a tank wheel was dropped against his left ankle. This injury resulted in extreme pain in the ankle, and the patient spent 40 days on the sick list, the first 3 weeks of this time being spent with his left ankle immobilized and non-weight-bearing. X-ray films were taken at that time and the patient was informed that a fracture had not been incurred. Because of the exigencies of warfare the patient was returned to duty despite the fact that he continued to have pain of a severe nature in the left ankle and rather marked swelling of the left foot and ankle upon weight-bearing. In July 1944 the patient was obliged to jump hurriedly into a fox-hole during an enemy aerial bombardment. In so doing he struck his right knee against the ground, and this joint immediately became very painful. At this time the right knee was X-rayed, and again the patient was informed that no fracture had been incurred and was given conservative therapy over a period of 3 weeks and returned to duty. The pain in the right knee persisted following his return to duty.

During the ensuing months and years the patient was aware of constant pain in his left ankle and right knee, usually of a dull aching nature, but occasionally becoming sharp and knifelike. The pain did not radiate and was aggravated by standing or walking. About July 1945, the time of receiving his discharge from the Army, the patient noted the onset of profuse perspiration of both feet, and about Septermber 1945 he noted that his feet were very cold; from that time until the time of this hospital admission he wore heavy woolen socks even when sleeping. From the time of the aforementioned injuries the patient noted increasing motor weakness of the lower extremities which was rather rapidly progressive. He also noted that his lower extremities were becoming very thin and appeared emaciated when compared with the musculature of the other parts of his body. By October 1947 the patient became too weak to bear his own weight upon his lower extremities and the pain and coldness of both lower extremities had become unbearable. He was brought to the hospital by ambulance as an absolute stretcher patient.

The patient denied immoderate use of alcohol. He smoked one-half package of cigarettes daily. He had been employed by a railroad as brakeman before entering the service and upon being released therefrom. He had had a cholecystectomy in 1937 for gallstones and still had "bloating" after eating cooked fats.

The positive physical findings other than 2 white surgical scars on the abdomen were confined to the lower extremities. The skin of the lower extremities was purplish, mottled, very cold to the examining hand and covered with profuse perspiration. The temperature of the skin of the right great toe was 23°C. and of the left great toe was 22°C. The dorsalis pedis and posterior tibial pulsations were barely palpable bilaterally, and with an oscillometric cuff applied to the calf there was recorded a reading of only $\frac{1}{2}$ bilaterally. There was marked atrophy in all muscle groups of the left leg, and of the right thigh and leg, and coarse muscular fasciculations were seen in these muscles. There was a subjective lessening of the appreciation of light touch and painful stimuli over the lower extremities of the type seen in chronic arterial deficiency.

The clinical impression was reflex sympathetic dystrophy of both lower extremities subsequent to previously incurred trauma.

Chemical laboratory examinations were negative or normal. A roentgenogram of the right knee on November 12, 1947 showed an oval-shaped, rather dense fragment of bone measuring 17 by 10 mm. lying within the mid-portion of the articular surface of the lateral tibial table. There was a surrounding area of relative radiolucency. This had the appearance of an osteochondritis dissecans of the tibia. There were reactive arthritic (traumatic) changes involving the tibial table and femoral condyles.

A film of the left ankle was negative. There was an old chip fracture involving the internal malleolus which was of no clinical significance. The ankle mortis was well preserved. The right ankle was negative.

On December 8, 1947 bilateral procaine paravertebral sympathetic blocks were performed at the level of the second and third lumbar sympathetic ganglia. This resulted in a rise in temperature of 12°C. of each great toe and in the immediate relief of pain. This tem-

(Continued on page 603)

INSUFFLATION OF POSTERIOR PITUITARY POWDER IN CHILDHOOD DIABETES INSIPIDUS

Report of a Case

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DIABETES insipidus is described as a chronic disease characterized by the passage of large amounts of a very dilute but otherwise normal urine and an enormous thirst.[1] The disease is relatively rare, affecting chiefly young people but uncommonly children and being more common in males than females.[2] Jones[3] in a review of 42 cases of diabetes insipidus found the average age of onset to be 21 years.

In seeking to remove the necessity for daily, painful, hypodermic injections, attempts have been made using posterior pituitary lobe powder by the nasal route. Blumgart[4] as early as 1922 demonstrated complete relief of excess thirst and polyuria by the intranasal application of pituitary extract in the form of a spray or swab. In 1924, Andre and Lucie Choay[5] were able to reduce a polyuria of from 15 to 18 liters to 1.8 to 2.0 liters by the patient's snuffing 50 mg. of dry powder of the posterior lobe of the pituitary 3 times daily.

We believe the following case worth reporting because of the unusual age of the patient, and because he responded to the use of posterior pituitary powder by nasal insufflation.

Report of Case

C. J., a 9-year-old white boy, was first admitted to the hospital on January 21, 1948, with polyuria, nocturia, polyphagia, polydipsia, some weight loss, and an obvious malar flushing of his face. Prior to his admission he had been seen by a physician who put the child on sulfadiazine without relief of symptoms. He was said to have had diabetes mellitus. The patient's mother, being dissatisfied with the results, took the child to another physician who had the child admitted to the hospital for study. Physical examination revealed a well developed, fairly well nourished white boy with an obvious malar flushing of his face, with a craving for water, and a history of bed-wetting at night of 2 months' duration. The chest was clear and the heart was normal. The skin was dry, warm, and elastic. There was no evidence of dehydration. The rest of the physical examination was essentially negative. The blood pressure was 104/62 prone, and the pulse was of good quality. The urine was very pale and negative for sugar, albumin, acetone, and diacetic acid. The microscopic examination of urine was negative. A fasting blood sugar was 72 mg. per cent. The Kahn test was negative. X-ray films of the chest and skull revealed no lung, pituitary or bony abnormalities. The petrous portions of the temporal bones as well as the mastoids were X-rayed and found to be normal. The P.P.D. No. 1 and No. 2 tests were both negative. The urea nitrogen was found to be 4.1 Gm. per liter of urine, and the urinary chloride was 165 mg. per 100 c.c. of urine, both being somewhat diminished. A phenolsulfonephthalein test was found to have been within normal limits. The hemogram was essentially normal. The child was afebrile, and the urine examinations gave persistently negative results microscopically as well as for sugar and albumin. The specific gravity ranged from 1.002 to 1.005 on repeated examinations. The child's fluid intake was withheld for a period of 5 hours, which was as long as he could go without being too uncomfortable.[6] The specific gravity of his urine was still found to be low (1.004).

The child was given 0.5 c.c. of pitressin intramuscularly. The urinary output decreased markedly, his craving for water subsided, and his urinary specific gravity rose to 1.016 within 5 hours.

A diagnosis of primary diabetes insipidus was made, and the use of posterior pituitary powder by nasal insufflation was begun. The child was put on an outpatient basis, and the mother was instructed to give him ¾ grain of the powder in each nostril with the aid of a nasal insufflator on rising and at bedtime for a period of 1 week. The mother kept a chart of the child's intake and output. Within 3 weeks' time the dose of powder was increased to 5 capsules of ¾ grain each nasally, daily. The patient had ceased to urinate or drink water at night. There was a cessation of bed-wetting. Within another week the child's intake had been recorded as 4,000 c.c. daily with an output of 3,000 c.c. The urine examination revealed an almost amber-colored urine with a specific gravity of 1.016. The malar flush had disappeared, the child was said not to have been as nervous as previously, and he had begun to gain weight.

The rarity of this condition, as well as the infrequency of occurrence in children, prompted the report of this case. The results of treatment with the posterior pituitary powder of pitressin by nasal insufflation gave relief of symptoms and obviated the use of daily intramuscular injections of pitressin. Attempts were made to rule out the more common etiologic factors associated with the secondary or symptomatic form of the disease. By means of laboratory and X-ray examinations we were able to rule out the secondary factors of diabetes mellitus, syphilis, renal disease, pituitary tumor, pulmonary disease, and hysteria.

We believe this to be a case of primary or idiopathic diabetes insipidus in a young male who has responded to therapy with the posterior pituitary powder. On one occasion when treatment was omitted because of shortage of the drug the symptoms recurred during that period.

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SYMPOSIUM ON WILMS' TUMOR*

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Dr. Judge: Tumors of children, although observed infrequently in general practice or general hospital practice, are a problem of importance to a children's hospital. Cancer ranks very high among the causes of childhood mortality. In the past many tumors of children of the 1- to 4-age group have had a higher mortality than others. This probably is attributed to the fact that after the infant stage the child is rarely taken to a physician routinely until he begins school. One tumor occurring in this age group is Wilms' tumor. All of the published reports concerning this tumor give a poor or nearly hopeless prognosis. An attempt will be made in this discussion to review the clinical, surgical, urologic, roentgenologic, and pathologic aspects of the tumor, and, with a review of the cases at this hospital from the period of 1934 until 1948, to realize information that will improve our knowledge and our statistics.

Dr. Burdick: Since the pediatrician is usually the first one to see these cases it is appropriate, in a symposium such as this, to call his attention to some of the clinical features of the disease. There are several tumors in the kidney area indistinguishable except by histologic examination after surgical removal. There is the neuroblastoma of the adrenal tissue, the unattached retroperitoneal embryonal tumor, and the embryoma of the kidney, or Wilms' tumor. It is not important, moreover, to know before operation just which type of tumor one is dealing with.

All of the tumors in this group are malignant and are usually well encapsulated. They remain small for an unpredictable period of time, then enlarge suddenly and rapidly. The sudden enlargement is caused by massive hemorrhage which occurs into the rapidly growing tumor. Several days after a complete physical examination when no mass is felt the child will present a very large abdominal tumor. On this basis we can rise to the defense of the pediatrician who often sees the child a few weeks before the tumor mass is discovered by someone else.

So far as symptoms are concerned they are conspicuous by their absence. These children do not present the urinary tract symptoms found in adults. The first thing that is noted is a palpable abdominal mass. This is often noticed by the parent before it is felt by the physician. The mass is solid, non-tender and not mobile. The border is usually smooth and rounded, sometimes extending to the midline and down into the iliac fossa. Since early diagnosis and the treatment are imperative, all of us should palpate every child's abdomen thoroughly and deeply in our routine physical examinations.

The differential diagnosis may present some difficulty at times. The 12-year-old colored boy included in our series who was seen here in March had an admitting diagnosis and a clear clinical picture of appendicitis. These masses may be confused with enlarged livers, cysts of the liver, and enlarged spleens. The latter masses lie directly beneath the abdominal wall, and the splenic notch can often be palpated in the splenic tumors. Tumors in the kidney area lie deeper, and tympanic bowel frequently overlies them.

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* From Children's Hospital, Washington, D. C.

The intravenous pyelogram has its greatest value in establishing the presence of the other kidney. The calices can be distorted from a lesion in the kidney or a large adjacent mass pressing on the kidney.

We all hope now, through the efforts of the Tumor Board, and the interest in these cases at Children's Hospital, to have better results in the future with our patients suffering from Wilms' tumor.

DR. JARMAN: The record of Wilms' tumors seen and treated here at Children's Hospital is one not to be envied. The record from other hospitals seems considerably better and therefore puts us in a bad light as far as other statistics are concerned. It should behoove us to find out if possible why others are getting better results than we are. I thought it might be revealing to give you some of the statistics of other men. So far as statistics are concerned, they bear out what I have just said, that ours are much worse.

The best results thus far reported are those of Silver[1] from the University of California. In his series of 18 patients with Wilms' tumor, 13 had nephrectomy and 10 were alive from 2 to 15 years following treatment, a survival rate of 76.9 per cent. He emphasized that there was no standard treatment used. Every patient who survived had had a nephrectomy. Three of the 4 patients who had nephrectomy without either pre- or postoperative irradiation were alive and well after 9 to 15 years. Preoperative irradiation was used only if technical removal, because of the tumor's size, was impossible. The majority of the patients in his series had the kidney removed through a posterolumbar incision. Interestingly, 1 of his patients developed pulmonary metastasis 7 months following nephrectomy, and following X-ray therapy alone for this metastasis the child is well 2 years without recurrence. Truly, this is an amazing survival rate. No details were given with reference to the type of postoperative irradiation, and therefore I cannot comment on this.

Weisel et al[2] and Priestley and Schulte[3] from the Mayo Clinic have published articles on Wilms' tumors, but several of their patients were adults and the figures are not suitable for our discussion in children today. Neumeyer[4] reported 7 cases in all of which death occurred within 5 months following operation. Nesbit and Adams[5] have an interesting series. They had a total of 16 cases, with 8 alive $3\frac{1}{2}$ to $4\frac{1}{2}$ years following operation. One case was considered inoperable because of the size of the tumor, as well as the presence of pulmonary metastasis. However, a punch biopsy was done and was adequate for a positive diagnosis of adenomyosarcoma. The patient was given X-ray treatment only and is alive and well 10 years following the diagnosis. Two patients at the time of nephrectomy presented evidence of retroperitoneal extension of the tumor and I believe are well following postoperative irradiation. In comparison with these figures what we have been doing needs improvement.

The question of the surgical approach has come up from time to time, and I think a word should be said regarding this. Statistics do not prove that the transverse approach gives a better prognosis than a posterolumbar approach. However, I do feel that if there is anything to getting at the renal pedicle first, then the transperitoneal approach should be used. Recently Sweetser[6] has advocated an incision which does away with going through the peritoneum. This is an incision which begins as a loin incision and is carried down across the right rectus muscle and then up the midline to the xyphoid. Turning this flap back and pushing the peritoneum medially enables one to get at the pedicle first.

When these renal tumors come within the province of the genitourinary specialty, the urologist must make every effort, which I feel he has done, to try to salvage some of these tragic cases. At the present time, it is my feeling that nephrectomy should be done as soon as the diagnosis is made, if it is technically feasible. If the tumor is too large, preoperative irradiation should be used, and just as soon as the tumor is operable, removed, rather than to wait the conventional 4 to 6 weeks. To my mind the most important adjunct in the treatment of these tumors is radiation. This should be given in as large doses as can be tolerated, and I feel should be given to the entire lymph drainage area where metastases are likely to occur. This means the mediastinum and the nodes on both sides of the aorta. Should a local metastasis arise, I do not feel that surgery is out of order. As far as the type of approach is concerned, I feel that everyone would be willing to use the same approach, whether it be transperitoneal or retroperitoneal, in an effort to get a uniform follow-up series. The recently established Tumor Board seems to me a good medium through which to work.

The prognosis for children with malignant neoplasms of the kidney, I definitely feel, will depend upon 3 factors: (1) as early diagnosis as possible, (2) nephrectomy as soon as possible, and (3) intensive, complete postoperative irradiation.

Dr. Sager: Wilms' tumors occur so infrequently in an individual surgeon's practice that it is necessary for purposes of study to rely upon the results obtained in their treatment by many individuals and in those of institutions where there is a great concentration of pediatric material. It is hoped that a result of the organization of a tumor board in this institution will be a more complete record of these cases and that a study of the methods used in treatment will lead to rapid, accurate diagnosis and a determination of the best plan of therapy.

The use of X-ray therapy in the treatment of Wilms' tumors is an important addition to surgical removal. Preoperatively it does not destroy all the malignant cells, but it does decrease the size of the tumor, making surgical removal less difficult. To accomplish these results a period of from 2 to 3 weeks of treatment is required. Because of this delay Ladd and White[7] and Ladd and Gross[8] do not advocate its use. Any decrease in their mortality rate, which is one of the best, they feel is more than balanced by the danger of metastatic lesions developing during the period required to obtain results from X-ray treatment. Postoperatively X-ray therapy is generally used. The degree of its effectiveness may be questioned, but it can do no harm and there is always the possibility of a cure or a prolongation of life resulting from its use.

Transfusions should be given before operation if indicated, and preparation for blood and fluid infusions should be made in order to combat the effects of shock, if it occurs. X-ray examination for the purpose of discovering metastatic lesion should be made before operation. Surgical removal of the tumor should be carried out as soon as the necessary information as to the child's condition can be obtained and necessary corrective measures completed.

The types of approach to the tumor in general use are through an oblique posterolateral incision in the flank, or anteriorly through the anterior abdominal wall. The anterior abdominal wall incision may be made from the costal margin downward either with retraction of the rectus muscle laterally or splitting its fibers. A transverse incision has been used by some operators. The anterior approach allows for the removal of the tumor with less handling before the renal pedicle is reached and also makes possible adequate exposure for large tumors which may be difficult to obtain through an oblique posterolateral incision. For the reasons mentioned the anterior incision is probably the one of choice.

Dr. Lattman: A definite diagnosis of Wilms' tumor cannot be made from the roentgen findings alone. A plain film of the urinary tract may reveal the intestines to be displaced toward the opposite side by a smooth round mass of increased density; the psoas shadow on the affected side is not visualized at all or not as clearly visualized as on the normal side; occasionally some calcific shadows may be visualized on the affected side. The above findings, however, occur only when the tumor is large enough and old enough to show calcific changes. In many cases in which the tumor is small and young the plain film is negative. In urograms, preferably intravenous, as in the plain film, the result may be negative if the tumor is small and does not impinge on the pelvis of the kidney. If the tumor impinges on the kidney pelvis, distortion, fragmentation, and distention of the pelvis and calices may occur in different cases.

It is difficult, if not impossible, to make a differential diagnosis by roentgenologic means alone between a neuroblastoma which often occurs in this region and Wilms' tumor. Occasionally the pelvis of the kidney, in the case of a Wilms' tumor, may be so elongated and so stretched and a smooth arc so described as to suggest a polycystic kidney. Polycystic kidneys, however, are usually bilateral, but even then a conclusive differential diagnosis cannot be made. Nevertheless, a complete urologic work-up should always be done and must include X-ray studies, including a chest film and films of the long bones and skull, because the difference of location of metastatic foci is of help in making a differential diagnosis. The neuroblastoma usually metastasizes to the lungs, pleura and liver.

In tumors of the kidneys the radiologist is of greater help in the realm of therapy than he is in the realm of diagnosis. As to X-ray therapy there are several schools of thought. There are those who advocate pre- and postoperative therapy, postoperative therapy alone, and no therapy at all. All agree that surgery is essential and that if the tumor is too large for removal because of technical reasons, preoperative therapy must be used in order to make the tumor removable.

The statistics of the different groups are not large enough nor sufficiently convincing, to me at any rate, that any one group provides the final truth. The record of our own hospital in the Wilms' tumors is sad indeed, no matter how the patient is treated, and we have treated them in the different ways mentioned above. The record of some other hospitals is good, but there seems to be no absolute uniformity of treatment. Each case must be considered separately and treated accordingly. Only a few years ago Ladd and Gross advocated neither pre- nor postoperative radiation, although they had to resort to preoperative therapy when the tumor was too large for removal. In the last few years, however, they have become staunch advocates of postoperative therapy immediately following the nephrectomy.

As a radiologist I am firmly convinced that a short but intense course of preoperative therapy given in 2 weeks should be used in most cases. In addition to shrinking the tumor and making removal an easier procedure the lymphatics in the surrounding areas where metastatic cells may be present are treated and destroyed. The rate with which the tumor decreases in size is a help in the differential diagnosis between Wilms' tumor and neuroblastoma, since Wilms' tumor decreases in size with small doses of X-rays much more rapidly than does the neuroblastoma. Following nephrectomy a more intensive course of X-ray therapy should be instituted.

It is to be hoped that with a tumor board now established in this hospital a more thorough study of each case will be made. Better records will be kept and some way of getting the patient earlier to the clinic will be devised. This will lead us to more rapid and more accurate diagnosis and to a more definite plan of therapy.

Dr. Rice: In considering the abdominal tumors which one is likely to encounter in a child 5 years of age or younger, we will not encounter too much difficulty in making a fairly accurate diagnosis if the cystic tumors and hepatic tumors are eliminated. High on the list of probabilities will come the neuroblastoma and embryonic tumors of the kidney (Wilms' tumor).

Both of these tumors are fairly well fixed and in general are found on one side of the abdomen. The lack of nodularity tends to distinguish the adenomyosarcoma (Wilms' tumor) from the neuroblastoma. Although both may be associated with the kidney, either by invasion or by arising from it, the neuroblastoma may have its origin quite apart from the kidney and may not involve it in any way. The tumors are quite different in the matter of their metastases, the neuroblastoma tending to produce much more extensive metastases and at greater distances from the original site. Both invade the lung and the liver, but Wilms' tumor rarely extends beyond these organs and the structures in the abdomen, whereas neuroblastoma may extensively involve the bones, with tumor-bearing areas being present in the skin, the orbits and brain.

Structurally Wilms' tumor is usually rounded or slightly elongated. Although they may be firm, it is not uncommon to find areas of degeneration and hemorrhage intermixed with firm portions which may be representative of connective tissue, cartilage, or bone. The remains of the kidney will be found as part of the tumor mass, either extending from it or enveloped by the tumor. The adjacent lymph nodes, liver and lungs are commonly involved.

Microscopically the tumor is made up largely of epithelial masses, in some areas of which can be noted tubular-like structures. Connective tissue is also usually prominent, and muscle fibers and occasionally cartilage and bone are sometimes seen. Blood vessels not infrequently contain tumor cells.

It is difficult to understand how some of these tumors can reach the size of a small football without being noticed by a parent; however, the statement that one of these children was examined by a competent urologist, who found no abdominal tumor just 3 weeks before a sizable mass was recognized here, gives us some idea of the speed with which they can enlarge. This is a good argument for their prompt removal, and perhaps this child's being alive today may be due to the promptness with which he was operated on.

The poor results obtained and the diversity of approach and treatment make the study of this type of malignancy by the Tumor Board a logical one. Through the united interest of those who are concerned with the subject, viz., pediatricians, surgeons, radiologist and pathologists, our knowledge will increase and our results are bound to be better.

Dr. Judge: A review of our statistics since 1934 reveals that there have been a total of 24 cases.*[9] Thirteen were males and 11 females; 14 were of the white race and 10 were colored. The tumor was on the left side in 14 cases and on the right in 10. No case of bilateral tumor was noted. Table 1 tabulates the patients according to age, and it is seen that 17 cases or 70.8 per cent were in the age group from 1 to 5 years.

TABLE 1

AGE	NO. CASES	PER CENT
5–12 mos.	3	12.5
1– 2 yrs.	4	16.7
2– 3 yrs.	10	41.7
4– 5 yrs.	3	12.5
5– 6 yrs.	2	8.3
6– 7 yrs.	1	4.1
12 yrs.	1	4.1

In the majority of cases of Wilms' tumor the first symptom is painless, progressive enlargement of the abdomen with the discovery by the parent of an abnormal mass in the abdomen. Table 2 enumerates the symptoms of our patients. If the child is seen early it will be found

TABLE 2

Symptomatology

Abdominal distention or palpable mass	16
Abdominal pain	7
Vomiting	5
Hematuria	4
Fever	2
Urinary frequency	2
Weakness	1

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* Cases included in this review include 19 cases of Wilms' tumor at Children's Hospital reviewed by Drs. Lois Murphy and F. R. Leyva in May 1946 (to be published).

to be well nourished and developed, with weakness, vomiting and abdominal pain occurring in those patients seen in the later stages of the disease. Hematuria occurred in only 4 cases or 17 per cent and was usually noted late in the course of the disease.

Because the number of patients is limited and the treatment varied considerably, it has been difficult to come to any definite conclusions. Since 1936 the tendency in treatment here has leaned slowly toward that of Priestley and Broders,[10] although as of this date, from the apparent success of Ladd's group in Boston, their method seems to offer the best results and is consequently preferred. Prior to 1946, of the 19 cases seen 14 were proven microscopically and had operative intervention. Three patients had X-ray therapy alone when the condition of the patient was extreme, and 2 patients were seen terminally and received no treatment. Six children received preoperative radiation, and 13, all but 1 of the 14 operated upon, received postoperative radiation.

As has been stated, with the advent of increased knowledge and organization of treatment of tumor cases since 1946, our policy has changed. As yet because of the small number of patients and the insignificant time interval no conclusions can be drawn. Of the 5 children treated in the later period, all were operated upon and 4 are alive to date. One patient who had an immense, infiltrating, necrotic tumor died during operation. One of the 4 living children received preoperative radiation because of the size of the mass. Significantly enough, this child had been seen prior to admission because of abdominal distention 2 months previously. All of the remaining patients received postoperative radiation. One child has a recurrence of the tumor mass in 9 months. The other 2 are symptomless and without clinical signs after 6 months.

The technic of operation for the 5 cases in the new group has been the abdominal approach in 2 and the oblique flank incision in 3. Silver[1] has reported 77 per cent cure with nephrectomy incision, but a review of the combined statistics of others seems to favor the abdominal approach.

Although the value of postoperative radiation cannot be denied, it is interesting that in the 1 cure from this hospital neither pre- nor postoperative radiation was given. This child of 17 months was first seen with the presenting complaints of abdominal distention and is now well, 45 months postoperatively. The infant, interestingly enough, had had a complete urologic work-up at a large institution 3 weeks prior to admission without evidence of the tumor being found at that time. This can be explained easily by the rapidly growing nature of the tumor or the fact that often there is no disturbance in the intravenous pyelogram. This case might well emphasize the danger of postponement of operation for any length of time.

The variance of survival rate from 77 per cent in one section of the country to zero in another certainly does not depend solely on the malignancy of the tumor, although Silver possibly may have a group of patients with tumors of low malignancy. There are several points which seem to be most important: (1) the education of physicians and teachers, as well as parents and other laity, to the existence of Wilms' tumors and tumors of children in general, (2) consideration of abdominal tumors as a strict emergency in children, (3) restriction of examination and palpation of the abdomen to an absolute minimum, and (4) standardization of all procedures, as far as possible, with the use of the best operative technic along with adequate postoperative radiation. These objectives along with the formation and operation of a tumor board to insure the uniformity of technics and adequate follow-up will help to better the situation concerning Wilms' tumor.

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President's Page

IMPORTANT TO OUR MORALE

I would like to direct the attention of our membership to two activities which are very important to the life and the morale of our city; they are at this time much in the public eye, and they concern the medical profession in a special sense. I am referring to the Health Department of the District of Columbia and the Community Chest Federation.

Relations between the Medical Society and the Health Department have not always been without friction. This was particularly true during the transition from the earlier Health Department, which was a child of the profession and thus in a very real sense of the Society, to the modern organization which has assumed a leading function in matters which affect the public health. In all such developments, as in the growing up of children to assume their own places in life, some strains, some jealousies, are likely to occur. However, the relations at present are more harmonious than for a long time, and there is real will for coöperation.

I would call your attention to the new plans for reorganization of the Health Department recently proposed by the Health Officer, and directed toward improved efficiency of operation and the securing of better facilities for the care of our sick poor. The Department, during the term of service of its present chief officer, has accomplished remarkable things along these lines and in giving our city a modern health administration. Many of our members have done yeoman service in implementing this work. I urge your continued interest in private and public support of the efforts to establish and maintain a department which will rival in quality and service outstanding city health departments of the country.

The Community Chest Federation is of special interest to the doctor because so many of the organizations it supports are, of necessity, closely linked with medicine, and because, above all, it gives major support to the voluntary hospitals, and furnishes a large proportion of the funds needed to care for the sick poor. It is easy to criticize this or that about the service, yet I believe if it is examined without prejudice, and the integrity and judgment of its leaders considered, it will be found an indispensable element in our community life, meriting our truly generous support, which I hope it will have this year when it is sorely needed.

John Minor

Editorials

GROUP HOSPITALIZATION—A COMMUNITY INSTITUTION*

In fourteen years, Group Hospitalization's plan for prepayment of the cost of hospital care has been accepted by more than 375,000 residents of Washington and vicinity as an integral factor essential to their security in times of illness.

It was on March 15, 1934 that Group Hospitalization, Inc. opened its first office on the third floor rear of an old Vermont Avenue residence. The quarters had little to recommend them, but they provided shelter and even then they represented a little more, perhaps, than one could reasonably hope to obtain for a monthly rental of $7.50.

At that time a plan for voluntary prepayment of the cost of hospital care in the Washington area was scarcely more than an idea in the minds of a few men, among them being Mr. Joseph H. Himes, who has served as President continuously for 14 years, and Mr. E. J. Henryson, who recently retired as Director. These and other public-spirited individuals laid the foundation on which has been built a sound and enduring community institution. Their industry and unswerving faith in an idea brought Group Hospitalization into being and nursed it through the early years when less skillful care could easily have proved fatal.

Only a short time was required for the people of Washington and vicinity to recognize voluntary prepayment as a sound and practicable way of meeting the cost of hospital care. Within three years, enrollment stood at nearly 50,000. Today enrollment is steadily approaching the 400,000 mark.

Through the years, Group Hospitalization has had a two-fold responsibility. On the one hand, as a civic, non-profit institution, GHI must make it possible for subscribers to obtain hospital care at the lowest possible cost. On the other hand, GHI also must see that the hospitals receive adequate and equitable compensation for services they provide.

Within the last few years the cost of hospital services has soared, and because GHI subscribers receive hospital services instead of indemnities when they are admitted to participating hospitals, the amount Group Hospitalization pays hospitals has increased proportionately. Since GHI was established, payments to hospitals have amounted to more than $12,000,000. This year alone it is estimated payments to hospitals will total approximately $2,800,000.

As hospital costs continued to rise, GHI sought by every means to avoid increasing charges to subscribers in the hope that if costs did not actually decrease, they would at least begin to level off. When payments could no longer be met from income, GHI was compelled to draw upon its reserves. Finally, within recent months, it was reluctantly conceded that only by increasing charges to subscribers could Group Hospitalization continue to serve the best interests of both subscribers and hospitals.

The new charges, effective with payments due on and after November 1, will enable GHI to meet higher hospital costs, provide subscribers with new and added benefits—greater protection than they have ever had at a time when they need it most—and protect reserves so that they will continue to be adequate to meet unpredictable contingencies, epidemics or disaster.

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* This is the twenty-eighth in a series of guest editorials by distinguished physicians and laymen.

Last April, Group Hospitalization embarked on a new major undertaking when it agreed to administer a plan offered by members of the medical profession for voluntary prepayment of the cost of surgical and obstetrical care. Sponsored by the Medical Society of the District of Columbia, the Plan made available through Medical Service has met with an enthusiastic reception. In the first five months 80,000 persons were enrolled—an enrollment GHI did not attain until after five years. The services of more than 1,000 physicians are available to participants.

With Group Hospitalization participants occupying approximately 40 per cent of the beds in participating hospitals and with the Medical Service Plan off to an excellent start, the people of Washington, members of the medical profession, the hospitals, and GHI have gone a long way together in voluntary prepayment of costs arising from conditions that require expert care. But much remains that can be accomplished.

It is estimated that illness costs the United States 8,600,000,000 man-hours of work each year. Authorities report that a bare 20 per cent of the United States families—those with incomes of more than $5,000—can pay for all the care they need; that an additional 30 per cent with incomes between $3,000 and $5,000 have trouble meeting more than routine medical expense, and that the remaining 50 per cent with incomes under $3,000 find it hard if not impossible to pay for routine medical care.

These conditions emphasize the need for voluntary prepayment hospital and medical service plans that can be offered on a community-wide basis, with minimum restrictions upon eligibility so that virtually 100 per cent participation by all who desire protection is possible. In the Washington area as elsewhere, losses arising from illness are costly. Intent upon helping to reduce this tremendous waste, Group Hospitalization and Medical Service are looking forward to the time when it may be possible to offer prepayment of the cost of hospital and medical care to all who desire it, regardless of where they may be employed.

There are no miracles to explain the progress made since Group Hospitalization opened its first modest office on Vermont Avenue, nor will there be miracles in the future. The task that remains to be done is a big one. Yet, with careful planning and hard work together with the continued coöperation of participating hospitals, the medical profession, and the public, GHI and Medical Service are confident that their services will be brought within reach of a constantly increasing number of people in this area.

F. P. RAWLINGS, JR.
Director, Group Hospitalization, Inc.

SEX EDUCATION

From time to time well-meaning enthusiasts urge the Board of Education to include in the curriculum of our high schools a special course in sex education. Either they do not know, or they lose sight of the fact, that sex is explained in the elementary schools and high schools whenever it occurs in the other studies of the youngsters. Literature, botany and biology, for example, all have to do with sex, and explanations are made in a natural and matter-of-fact manner when they are in order. By the time the average youngster enters high school he has a great deal of knowledge on the subject anyway, so that there appears to be no need to emphasize its importance by a special course.

Some children are curious about sex while others are not. The former should receive detailed information when they request it, but answers should be couched in language suited to the age and mentality of the questioner. Efforts to instruct youngsters before they request information are often more embarrassing to the child than they are to the parent, or they lead to confusion and lack of understanding.

A father of a twelve-year-old boy attempted to instruct him concerning the facts of life. When he had finished, he asked the boy if he had any questions he would like to ask. "Yes, Dad, I have," said the boy. "Dad, do you think the Washington Senators will finish in the second division?" Sex education was wasted on that boy. He was not ready for it.

The function of the public schools is to work in coöperation with the home and the church for the purpose of producing good citizens. No one of these agencies is likely to succeed without the help of the other two. When there is that coöperation, the result is usually happy unless the children are maladjusted or deficient in natural faculties. I believe that the majority of juvenile delinquents—and adult delinquents for that matter—belong to the latter group, and that no amount of home, church, or school training will prevent them from becoming delinquents unless the maladjustments can be corrected early. The prognosis of the mentally deficient is bad.

Control of sex depends upon discipline, self respect, knowledge of God and the hereafter, and a clear recognition of right and wrong. Good literature, athletics, games, and supervised social association with good companions of the opposite sex also help. Contemplation of sex and detailed knowledge concerning it may lead to experimentation and lack of control. Witness the venereal disease reinfections which are so common and the number of divorces granted because of adultery. These are not due to ignorance of sex.

It is a very exceptional boy or girl who reaches sixteen today without a fairly correct idea of what are called "the facts of life." Ordinary intelligent observation must educate in that regard. Newsstands groan with sexy literature, many motion pictures are suggestive in spite of censorship. Most theatrical performances contain salacious lines. The youngster who gets into trouble today and explains that her mother had never warned her is not honest and is making up an alibi, or she is a moron who would not have understood her mother anyway.

Only here and there do we find an adolescent who is worried about some sexual problem and this generally relates to himself. The school counsellor, the doctor, or the parent can usually impart the proper information and the worry will cease.

It is a very different matter to discuss this delicate subject in private from attempting to teach it to thirty or forty assembled students. High school teachers do not have the knowledge nor the experience nor the understanding to give a satisfactory course of this kind. The effect on the students may be the creation of mirth and derision or, what is worse, disgust and fright. An example of the futility of such instruction is the effect on students who have sat through courses on the evils of alcohol and tobacco which have been given for fifty years in our high schools by teachers whose training could not qualify them to discuss these subjects. The textbooks used contained more propaganda than truth. If the reader can remember his high school days, he will smile in retrospect. At the time he probably laughed.

Sex should be taught at the right time, in the right place, and by the right person. If parents feel that their instruction would not be adequate, the doctor, the clergyman, and the school counsellor can be consulted. Sex does not lend itself to group instruction of adolescents.

JAMES A. GANNON, M.D., F.A.C.S.
Member, District Board of Education

III. EDUCATION IN THE HOSPITAL

Relation of the Medical Staff to the Hospital

A simple fact is emerging so that all may see. The voluntary hospitals and the private practitioners who constitute their staffs must sink or swim together. Plain as it is, however, recognition of this mutual dependence is not widespread, even among those whose futures depend upon the immediate development of a teamwork which is now rather chaotic.

The basic problem then has two aspects. There must be general understanding of the need to pull together and not apart. The detailed forms of the teamwork must be agreed upon and followed faithfully. More specifically, the members of the American Medical Association and of the American Hospital Association must see that they have many more common objectives than points of competition. And they must develop a pattern for planning and for coöperative performance which heretofore has not existed.

At the grass roots where these things must really come to pass, two definite efforts must be made in each hospital. The leaders on the governing board and on the medical staff, aided always by the administration, must recognize that their mutual dependence stretches out into the farthest reaches of their community. Neither can exist without the other. This appreciation and recognition must lead into the second phase, of many connected steps:

1. Board-staff liaison must be far closer and more understanding than is usually seen. It must be not only resolved and set up, but must be actively and constantly functioning to continue and grow.

2. Younger, actively practicing physicians must have place on the governing boards. They should have specific duties or assignments and make regular reports to the governing board. To suggest that they cannot perform these duties unselfishly is to insult both a profession, which still has members of honor and high morality, and the boards, presumed to be incompetent to find such members.

3. There must be developed a hospital administration which is something more than simple bookkeeping and purchasing and petty housekeeping. There must be under the administration first of all a fiscal policy which is frankly honest and moral and economical. It must be based on records, accurate, complete, and current enough that deviation from a goal of solvency will be recognized within a month of its ocurrence. Secondly, the administration must be the center and the key to a dynamic policy of institutional relations to all of its affiliated groups and especially to the public, and realize that certain readjustments are necessary to conform with costs and standards of living.

4. When these three steps are established and developing, the enlarged role of the medical staff must be shown. The medical staff is made up of all physicians who treat patients in the hospital. While for administrative purposes it must be divided into several groups of varying responsibility, there is no member who does not have a real duty to the hospital. It can be shown that even the physician who shops around among hospitals for the one currently most pleasing to him or his patient has a real, long-range self-interest in doing everything possible to support these voluntary institutions. For if the financial obligation of these hospitals to the state, already great, becomes larger they will surely, one by one and in groups, begin to drop from the ranks of the independent. The roving practitioner will be among the first to have his privileges and his own independence affected. There is no member of the medical staff who does not have a real duty to his hospital. And, it goes considerably beyond the traditional one of free staff treatment and teaching as set up in the orthodox plan.

And so there is no denying the increasing duty of every physician to inquire more closely into his relations to his hospital. Both conscience and self-interest demand that he study and take an active developmental interest in its fiscal and public relations policy. And, that he take this interest and activity into his more purely medical forums. For their future too is tied up in the solution to this pressing problem.

C. S. W.
D. S.

In and Out of Focus

BY THE OBSERVER

Another Assembly Is History

More than 2,800 persons attended the 19th Annual Scientific Assembly held at the Hotel Statler on September 27, 28 and 29. Reports lead to the conclusion that this Assembly measured up in quality both as to the scientific program and exhibits with the best offered at previous meetings.

Aside from the excellent scientific program and exhibits which are vital to the success of a meeting of this type, there were other features which contributed much to the excellence of the 1948 Assembly. Among them were:

The Annual Dinner, which is always a major undertaking. The committee in charge is usually anxious about attendance. There was no need for concern this year. The committee and the Woman's Auxiliary had done their job well. There were about 500 present at dinner. Those on hand were rewarded with an excellent program. Most impressive were the ceremonies in honor of Dr. Arthur C. Christie and Dr. Joseph S. Wall. The speaker, Morgan Beatty, nationally-known author, commentator, and reporter, proved highly interesting. The musical program was also most satisfying.

An Exhibit of Doctors' Arts and Letters deservedly attracted wide attention. The following exhibitors received awards or commendations:

Paintings, Water Colors, Drawings: First Award, "Rock Creek Park" (water color), William T. Gibb, Jr., M.D.; Honorable Mention (Second Award), "Portrait—Marya" (oil), Douglas Noble, M.D.; Special Commendation, "Alfalfa, Wheat and Corn, Virginia" (oil), H. C. Macatee, M.D., "Helene" (pastel), Walter A. Rath, D.D.S., and "Head of Man" (pencil drawing), Victor R. Alfaro, M.D.

Photography: First Award, "Air-Minded," Leslie French, M.D.; Honorable Mention (Second Award), "Paratrooper," William J. Tobin, M.D.; Special Commendation, "Jefferson Silhouette," Leslie French, M.D.

Sculpture: First Award, "Aborigine" (wood carving), W. E. Torrey, Jr., M.D.; Honorable Mention (Second Award), "Portrait of Mr. X," Rebecka Schneider, M.D.

Miscellaneous: Special Commendation: "Outward Bound" (marquetry), R. H. Mitchell, M.D.; "Honey Jug" (ceramics), Maurice H. Herzmark, M.D.; "The Gold Fish" (applique), Isabelle Blum, M.D.

Radio broadcasts by speakers on the scientific program were something new. They were asked to rearrange their talks for lay consumption. Many of them did this most successfully.

The Public Health Exhibit was better than ever, and was well received by the public.

The program presented at the Public Meeting was called "Science Writers Quiz the Doctor." It was different from any previously presented and very effective. Dr. Howard B. Sprague, the guest physician, Dr. Herbert P. Ramsey, moderator, and the science writers, Frank Carey, *Associated Press*, Gerald G. Gross, Editor, *Washington Report on the Medical Sciences*, Thomas R. Henry, *Evening Star*, and Ron Ross, *Science Service*, gave an excellent account of themselves.

The President of the Society, Dr. John Minor, presided at most of the major functions, and did so most graciously. He proved himself a capable chairman.

Months of effort went into preparation for the ASSEMBLY. Dr. Robert H. Groh, General Chairman of the Committee on Arrangements, devoted much time and effort to this undertaking. He had the close coöperation of the various chairmen and their committees, and the staff at the Society's Executive Offices.

The ASSEMBLY has become an indispensable feature of the Society's program. Undoubtedly it holds still greater possibilities, which will be realized by future committees.

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"Hard, Cold—Slippery"

"George Bernard Shaw once made the typical Shavian statement that 'The ice of life is slippery.' It seems to me that this statement has more than ordinary significance for the great social order of medicine. The road of medical practice throughout the ages has had the same characteristics as Shaw's 'Ice of Life'—hard-cold—slippery. It has consistently been a difficult road. The reception of the lay public has often been cold. And right at this point in history, I dare say, the medical practitioner, whether he realizes it or not, faces a set of circumstances which are the most slippery that have ever confronted his profession."

Thus Dr. A. E. Cardle, President of the Minnesota State Medical Association, effectively opened his Presidential Address last June. Enlarging upon this theme Dr. Cardle said he is not too much disturbed about "the hardness of the road" or the "cold skepticism" which in the past have so often greeted efforts of the medical profession in the realm of medical research. What did concern him was the "slipperiness underfoot as we move ahead on a path filled with greater responsibility than medical men have ever before faced."

Responsibility for the direction which the profession takes, Dr. Cardle said, rests on the shoulders of the individual physician. What he does, "not one year, five years, or ten years from now, but tomorrow and the next and every day," will be a deciding factor. He urged physicians to "take stock of the assets at our disposal, which we must utilize to the fullest if we are to have public opinion firmly on our side instead of having it flirt with Government-dominated medical care."

The medical man's greatest asset, Dr. Cardle observed, is the "personal and professional respect which he commands." This asset is valuable only to the extent that it is put to proper use. Disclaiming any intention to tell other doctors how to run their practices, he nevertheless called upon his colleagues "not for a single minute to lose sight of the fact that the sum total of the daily conduct of our individual practices is entered on the debit or on the credit side of American medicine."

Having devoted himself to some complaints against physicians, Dr. Cardle said, "It is imperative as I see it that we medical men merchandise our assets to the end that our profession is unquestionably allied with the public interest—so that our endeavors and objectives will be readily recognized by the average citizen as being identical with his health and welfare, and duly considerate of his pocketbook.

"One sure avenue in that direction is to drop some of our unwarranted reticence. We must stop looking at ourselves for a change and begin looking at the other fellow who makes up our clientele. We must get on somewhat more common ground with him, in our attitude, in our language, and in the small amenities of everyday business, which he will appreciate, and which are certain to redound favorably to us in our growth in the profession."

He concluded with these admonitions:

> "Let us get better acquainted with men in occupations unrelated to medicine, and enable them to take a closer

look at us. The doctor whose presence at a social function consists of sitting off in a corner talking shop with another doctor may be adding in a small way to his knowledge, but he is losing out in a big way on the opportunity to let others in the groups outside of his profession get a better appreciation of medical science and the men who are engaged in it.

"Let us polish up our good citizenship. An 'M.D.' should be the hallmark of leadership in the eyes of every layman, and many a doctor is living up to that leadership, although too often it is confined to purely medical projects. Too many doctors still regard civic, educational and social service endeavors either 'a little out of their field' or 'too demanding on their time.' We cannot arouse public enthusiasm for our cause if, in the limelight of the professional arena, we dodge our civic responsibilities.

"Let us avoid long-hair phraseology which suggests that we are hiding behind a cloak of technical knowledge. Many a patient would feel he is receiving more satisfactory treatment if common one and two syllable words were substituted for medical mumbo-jumbo he cannot understand.

"Let us make a conscious effort to be visibly interested in our patients as personalities. Our manner should clearly indicate that their problems are our foremost concern of the moment. It is time we doctors stopped making laymen discount our attitude toward them with such observations as, 'Well, Dr. Jones is a busy man and deeply absorbed in his work. I suppose that's what makes him a little peculiar.'

"Let us wear a friendlier smile. I do not mean that every doctor should have a petticoat of white teeth showing beneath the hem of his upper lip, but a sincere smile that springs from within can do more to set a patient and his family at ease—and again to make him feel satisfied that he is getting valuable personal attention—than can any recitation of formidable medical facts.

"Let us give more credit when and where credit is due. To my knowledge no doctor has ever hurt his own reputation by publicly praising outstanding work of another doctor. There is reason to believe that a little more of such justifiable praise would do much to allay the common misconception that medical men are split by wide personal differences and jealousies.

"Let us take a more active part in the efficient operation of our hospitals. The public will sympathize with us when we explain that high hospital costs do not originate with us, but they will not excuse us from the responsibility of working to keep those costs down and to make adequate hospital care financially possible for broad segments of the citizenry.

"Let us keep abreast of national affairs and national policies, particularly as they affect medicine.

"Let us determine to gauge all our actions by their potential effect on our clients and on the public. Only then can we expect that the public will vigorously agree that medical men still know more than anyone else how to run their own business. Complacency and aloofness must give way to aggreeableness, aggressiveness, sociability and well-mannered salesmanship."

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"... a Synthetic Subject..."

In an article appearing in the September number of the *Journal of the Association of Medical Colleges*, Dr. Milton I. Roemer of the United States Public Health Service writes, "The increasing lag between the potentialities of medical science and its practical application has led to a broadened interest in the social aspects of health and of medicine." This interest, he believes, has impressed medical schools with the need for instruction of students in "social medicine."

"While it would be hazardous to attempt a complete definition of a field of learning that is still so amorphous, some of the basic elements entering into a definition may be discerned. The field embodies relationships primarily between society and two main phenomena: the health status of the people, on the one hand, and the applications of medical and related science on the other. Thus an exploration of the effects of housing on health would be an instance of the first relationship and a study of the administration of different systems of medical care insurance would be an instance of the second relationship. Both of these relationships may be further broken down in accordance with the objective of one's study. Thus for both sets of relationships, there is what have been called a 'social anatomy' and a 'social pathology.' In dealing with problems of both types there may be a 'social diagnosis' and a 'social therapy.'

"While interest in social medicine, as here defined, is found in some degree at all centers of medical education, there is reluctance in many places to give the subject formal academic recognition. Among the reasons for this reluctance is the fact that the subject has long been associated with political controversy and bitter polemics; it is regarded as a more or less inevitable battleground for conservatism versus liberalism, which might create numerous problems in a medical or public health faculty; moreover, there are few persons available with the necessary knowledge of the subject, free from propagandistic overtones.

"As a result, in the medical schools resources for providing instruction in the social aspects of health and of medicine have been sought in three principal ways. The most frequent way, as shown by the recent report of the Joint Committee on the Teaching of Social and Environmental Factors in Medicine (representing the Association of American Medical Colleges and the American Association of Medical Social Workers), has been to bring students into contact with the social problems of the individual patient in the home and the community. Students work closely with medical social workers and learn of the social 'case work' approach. The emphasis here is to inculcate a practical and humanistic concern for the problems of the low income (usually) patient.

"A second and wholly different approach has been to call on a series of speakers from outside the university, identified with different points of view on controversial aspects of the field of medical-social relations. The emphasis here has been on a discussion of methods to organize the financing or provision of medical services. A third way has been to rely on the department of preventive medicine or public health in the medical school to acquaint the student with organized governmental measures to prevent disease. The emphasis here has been on communicable disease control and environmental sanitation. The three approaches have not been mutually exclusive. Many schools have used two and some have used all three approaches at the same time. The department of preventive medicine is most often responsible for launching the program, whatever its type.

"All of these approaches make a positive contribution, but none of them is coextensive with the broad field of social medicine. Each of them encompasses, in some measure, a segment of social medicine. To provide the student with the full, rich background of social medicine would require his orientation in all the ways that health conditions and medicine (science and practice) are related to social structure and function."

Courses in social medicine, in Dr. Roemer's opinion, should include the following subjects: public health, medical care organization, medical history, medical sociology, psychosomatic medicine, medical jurisprudence, medical ethics, and philosophy of science.

He apparently does not have very high regard for the attempts made thus far by medical schools in this field, for he indicates that not much can be expected "through outside speakers of different opinions, through medical social work departments, or through departments of preventive medicine and public health." Only segments of the whole picture, he says, are presented.

Dr. Roemer suggests that all departments of the university be used to develop an adequate program. "Thus knowledge and an objective point of view in medical economics could be contributed, in some degree, by the department of economics and the department of government or political science. The department of history could make its contribution to the history of medicine and health conditions. The sociology of health and of medicine would obviously be subjects within the special competence of the department of sociology." These and other departments of the university, he states, could make valuable contributions. Coördination between the various departments and the medical school is also suggested.

A full-time faculty member in the school of medicine would be required to maintain a liaison between the various departments. Qualifications of this individual would necessarily require that he be oriented sufficiently to be acceptable to both the medical school faculty and the other departments of the university. Dr. Roemer expresses the belief that a beginning might be made by employing an individual in the department of public health or preventive medicine. Ultimately he hopes that a department of social medicine will be created "on a level commensurate with other divisions of the medical faculty, like surgery or internal medicine, encompassing within it all or several of the eight separate categories cited above."

Finally, he proposes that those teaching social medicine be given some "factual and theoretical foundation" for the work in which they are engaged. He suggests that they might be assigned to various types of administrative responsibility in operating medical social programs. Valuable experience would be gained by taking an active part in the local department of health, social service department of the hospitals, a local prepayment plan for medical care, a public welfare department, a housing project, a local industrial medical service, a voluntary health agency, mental hygiene clinics, a course at the coroner's office, and other civic or social activities. Opportunities, he says, should also be provided for active research in this field.

> "Social medicine, by its very nature," Dr. Roemer concludes, "is a synthetic subject, bringing together the knowledge of many established disciplines, as they bear on health and medicine. At the same time it must be prepared to fill the many gaps in knowledge with new research and new analysis. The full development of the field of social medicine, then, depends first on maximum utilization of the theoretical knowledge of the entire university, second on the exercise of practical responsibilities in the local community, and third on the performance of research."

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Physicians and Hospitals Recent articles and editorials on hospitals and their problems which have appeared in the MEDICAL ANNALS have attracted wide attention in professional circles. This is not too surprising considering the serious situation of voluntary hospitals.

A few weeks ago, your Observer had occasion to discuss problems confronting these institutions with a superintendent of a Washington hospital. He commented favorably on the various observations which had been made in the MEDICAL ANNALS and the conclusions drawn by contributors. But, he said, the proposals made should have originated with the hospitals themselves.

Emphasizing the need for the active interest of physicians if voluntary hospitals are going to continue to exist, he said many physicians look upon these institutions as merely a place to take their patients. In his opinion, it is not essential that physicians be placed on governing boards of these institutions, but rather that they be responsible for their efficient operation. Upon being pressed to be explicit, he outlined the program which he thought would be effective. He proposed that below the level of the hospital governing board there should be an administrative committee consisting of twenty members, ten of whom would be appointed from the lay board and the remainder from the medical staff. This committee would consider and act upon all matters pertaining to the conduct of the hospital. Where matters of policy are concerned, the committee would submit its recommendations to the governing board. Thus physicians as well as laymen responsible for the hospital's operation would be in constant touch with the affairs of the institution, would feel a deeper sense of loyalty, and would see to it that patients and physicians alike who use the hospital's facilities benefit to the utmost.

Financial difficulties which threaten to engulf voluntary hospitals, this administrator insisted, can only be overcome with the advice and help of the medical profession. There is always the possibility of turning to the Government for subsidy, but, he said, in his opinion this is merely a wedge which would eventually undermine the voluntary hospitals and private medical practice.

If the program which he outlined were adopted, he said, physicians would no longer look upon the hospitals in which they work merely as workshops but as community institutions in which they and all citizens have a vital interest.

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No Other Way? There were few surprises for readers of Federal Administrator Oscar Ewing's report to the President, "The Nation's Health—A Ten Year Program." As was expected, Mr. Ewing presented his arguments for compulsory health insurance. They were rather thin in spots; nevertheless, he pleaded ardently for the cause which he espouses.

If there was no surprise in Mr. Ewing's report, the reaction of the *Journal of the American Medical Association* was not unexpected. It reflects pretty much the thinking of the vast majority of physicians.

The *Journal* editorialized in its September 25, 1948 issue as follows:

> "Here are the same old figures that the proponents of Government medicine have been launching at periodic intervals for the last twenty or thirty years. Some of them are requoted in a Washington Letter in this issue of the *Journal.* These undocumented statistics would be ignored if they were not being used in such a desperate, final gasp by the Federal Security Agency."

President Truman, to whom Mr. Ewing's report was submitted, was said to have stated that he was compelled to advocate compulsory health insurance because "he sees no other possible way of bringing medical service to fully half the American people."

> "Recently the general assembly of the World Medical Association met in Geneva with a considerable number of nations of the world represented," the *Journal* continues. "Reports were received on conditions related to medical care in more than twenty nations. The amount and quality of medical care given to most people of the world under their compulsory sickness insurance plans would never satisfy the people of the United States. The inevitable faults of these systems, which have been emphasized to the American physicians and to the American people for a good many years, are now coming vividly to light. Great Britain embarked on its new National Health Act on July 5. People in England may now go to the doctor without calculating the cost of the service. They may be supplied with spectacles and teeth without additional costs. They may have consultants and beds in hospitals without reference to individual payments for services rendered. That is what the National Health Act of Great Britain promised them. Do you think they get it? No, indeed! They queue up to see the doctors whom formerly they could have seen by appointment. Doctors are compelled to write formulas and prescriptions and reports many hours in advance of the time when they see the patients because otherwise they would never have time to see the patients. Many a physician is already satisfied that he cannot work under the Act. The unfortunate public have no way of knowing whether or not what they get is good medical service or something to make them think that they are being given attention. The greatest folly in the world is the manner in which Great Britain embarked on a nationwide health service without hospitals, doctors, nurses, drugs or money to supply what they promised. And an even greater folly would be the attempt to offer a similar service in the United States and to gulp the entire medical problem of the Nation in a single swallow. Should the United States accept the prescription by President Truman and his consultant, Mr. Ewing, it would likely discover that the prescription had little of curative value and a great deal of the ultimate effect of ipecac or apomorphine (these, Mr. Ewing, are classified by the books on drugs as emetics)."

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Are Opportunities Denied Young Doctors?

There is hardly any phase of medicine which is not now discussed in lay publications. The most popular subjects are new drugs and therapy. However, there has been an increasing interest shown in various phases of medical economics and the internal affairs of medicine.

An example of the latter is an article which appears in the October, 1948 issue of the *Woman's Home Companion*—"Give the Young Doctors a Break" by J. D. Ratcliff. The opening paragraph of this article sets its tone.

"It is axiomatic that the future of medicine lies in the hands of highly trained young physicians. Yet in a shockingly high percentage of communities these gifted young men are being systematically barred from practice by older men—medical monopolists."

Mr. Ratcliff then relates a hypothetical case of a young physician, Dr. Smith, who, after completing his medical training and having passed his American Board of Internal Medicine, decides to locate in a middle-sized town. It appears that upon careful inquiry the doctor has learned that the town needs "a man of his talents."

Talking to older physicians, he is received courteously with many good wishes. However, he soon discovers that they are not keen about his being situated in the community. "The older doctors," Mr. Ratcliff says, "assure Dr. Smith that he has nothing to worry about. Of course, he will understand, these things can't be done in a hurry. For the protection of everyone, he is told, he must serve a 'probationary period.' In other words, he can't have his staff appointment until this probationary period is over. If any of his patients get sick enough to require hospital care, he will refer them to a man already on the staff. How long this probationary period is to last is left pretty much up in the air.

> "With the door thus gently closed in his face, Dr. Smith retires to his office to wait—and let many of his painfully acquired skills go rusty. As long as he sits in his office, he offers no competition to older men. He can treat sniffles and boils and children's leg aches. But if any of his patients get really sick he hands them over to older men—probably never to see them again. Patients unfamiliar with the true situation conclude that there must be something wrong with Dr. Smith—otherwise he would be admitted to the hospital."

Mr. Ratcliff qualifies these observations by saying that there are "a good many older established doctors who make a point of helping the young Dr. Smiths of America."

This situation, according to Mr. Ratcliff, exists largely in middle-sized towns. For, he says, when young physicians find it difficult to obtain hospital appointments, they "drift to the cities where there is too much medical practice to be controlled by any small group of monopolists."

What can be done about this situation? Mr. Ratcliff has no answer. He says there is one group of physicians which suggests that when a student has taken his residency training and passed his specialty board examinations, he should be admitted to any hospital staff appointment automatically. Another, that such a course "would upset the medical applecart—producing ruinous competition which would tend to lower medical standards." The alternative, this group believes, would be group or clinic practice, where the younger man would be afforded an opportunity he could not otherwise obtain.

Dr. Allen O. Whipple, former President of the American Board of Surgery, has written an introduction to this article in which he says, "There is no question that well-trained physicians and surgeons, after completing their training as medical students, interns and residents, and after being certified by the rigid examination of the National Qualifying Boards—a training of five or more years after graduation from medical school, as compared to one year internship—are far better qualified and more competent than many of the older practitioners in the smaller cities of this country. There is no doubt that these younger qualified doctors are prevented from demonstrating their ability in a good number of communities by the failure of the local physicians to give these younger men opportunity to practice in the hospital or hospitals of the community."

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Midwesterners Live Longest

Much has been written in recent years on longevity. Varying views on this subject have appeared in this column. In no instance, in your Observer's recollection, have the authorities quoted reported the sections of the country where individuals are longest lived. However, data have just been made available which throw some light on this phase of longevity.

In the July, 1948 issue of the *Statistical Bulletin of the Metropolitan Life Insurance Company*, there are tables for the white population of the United States which reveal that, on the basis of mortality experiences in 1939–41, Midwesterners have the best record for longevity. The *Bulletin* states that in the West North Central states, the life expectancy during these years was 65.23 years for white males and 69.22 years for white females. "At the other end of the scale are the Mountain states, which had the least favorable record, the average length of life there being 60.98 years for males and 66.03 years for females." This poor showing is ascribed to the fact that there is high mortality among the Spanish-speaking people in Arizona and New Mexico.

The *Bulletin* observes that white men at the age of 45 in the West North Central states had a life expectancy of 27.56 years as compared with

(*Continued on page 604*)

PUBLIC RELATIONS AND THE VOLUNTARY HOSPITAL*

Lawrence Drake

Washington

I have been asked quite a few times during the past several years to outline the public relations job which I thought would help put the voluntary hospital on its feet. Time after time I sat down to fill the order, only to find myself stymied by the same dilemma. Either I blithely sold my friends in the hospital a bill of goods, which I had no interest in doing, or I told them bluntly what it was in the hospital picture that stopped me cold, which I was afraid they would resent. I have finally decided that it is time for those of us interested in the voluntary hospital to stop running around in circles, and to become a little blunt.

From a public relations viewpoint, the job of putting the voluntary hospital on its feet poses a familiar if quite complex problem. What it involves is the adaptation of a corporate enterprise to a new set of deterministic social and economic conditions. By deterministic I mean that these new conditions more or less set the terms for survival.

The voluntary hospital is a corporate enterprise facing such a problem. Conditions favor it. A phenomenal increase in the demand for hospital services, not a drop in demand, is one of the major and paradoxical causes of the hospital crisis. Moreover, there is ample evidence that we have the potential social base to support a voluntary community hospital serving the millions.

For the sake of clarity we can divide the job we face into two parts. Part one concerns the public. Public relations can be defined as the art of creating and maintaining intelligently desirable human relations and intelligently desirable attitudes toward one at all those vital points where such relations and such attitudes affect one's interests and purposes. As far as the hospital is concerned, the public relations problem it faces makes each citizen an "attitude" target and each patient a "relations" target. These two targets give us the hospital problem as both idea and reality.

Facing the public, we need, to start with, a public relations survey to determine what sort of an idea of the voluntary hospital we must project. We must find out what the public expects of a hospital; what it expects but is not quite able to express; what it thinks is wrong with the hospital. An honest and an intelligent analysis of the results of this survey will give us the outline of the idea of a hospital we must project to win the public. This same outline will give us the shape of the reality we must fashion. For the voluntary hospital is both an idea and a reality, and must be handled as such if we are to win for it the broad public support its survival clearly demands.

That would give us the pattern for the adaptation. We all know that successful adaptation is the primary condition for survival. To negotiate the act of adaptation, however, the hospital needs another public relations job. The objective of the second job is to draw the different self-centered economic interests the hospital supports into a working equilibrium. Physicians, surgeons, technicians, nurses' governing board—all must be won intelligently and actively to support the hospital's effort. The hospital must achieve this internal equilibrium of all interests if it is to win the freedom of action it needs successfully to negotiate the job of adaptation.

That is a rough thumbnail outline of the public relations job the hospital needs. And with that we are smack before the dilemma that has stymied me. Suppose we complete the job, the whole analysis, not only in detail but in brilliant and convincing detail. It will not, under present circumstances, do the hospital any good. It will not, and it cannot, because the voluntary hospital lacks the managerial apparatus with which to do the job. The hospital has not as yet developed the corporate brain center any enterprise of its size and complexity must have if it is to exist on terms other than as a mere uncertain pawn of circumstances. And that is the heart of the hospital problem.

Let us have a close look at the meaning of this shortcoming. A glance at a manufacturing company, facing a similar problem, will cast some light on the problem we face. The manufacturing company, let us say, has a good product. There should be a healthy market for it. Sales, however, have been dropping. The company's operations have dipped into the red.

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* This address was delivered before the Interprofessional Conference of the District of Columbia on June 29, 1948.

To get an objective analysis of what is wrong, the president procured the services of a public relations firm that specializes in marketing problems. After a thorough survey the firm submits its report. The company had gone along too long on the naïve assumption that if it delivers what it thinks is a good product everything else must take care of itself. Consumer demand has changed. The report recommends some alterations in the product. A new package must be designed. Some antiquated practices of the sales and promotion forces must be corrected. Human relations with the customers must be improved in a variety of ways. Hand in hand with these changes, the company must undertake a publicity campaign carefully calculated to overcome some prejudices the public has developed against the product.

In the main, we have here a pattern for adaptation that corresponds to the problem the hospital faces. In the manufacturing company the president has the responsibility for the job. He has the responsibility and the authority to procure the services of experts to deal with these problems. Who is there in the hospital who has the same responsibility and the same authority?

The president of the manufacturing company accepts the proposals. The changes to be made will involve some drastic action. He must deal with the stockholders, the bank, the trade unions, and the board of directors, to overcome friction and win the elbow room for action.

With that in mind, he has contracted with the public relations firm to prepare the public relations campaign for the internal job. This job will have to sell the case for the changes to all concerned within the company.

We can assume that the president will do that because we know that it is his business to maintain the different self-centered economic interests the enterprise supports in a working equilibrium that permits him the full latitude for the whole job he must do.

Who is there in the hospital to do this job? That the hospital does not try to make a profit does not alter the fact that it supports an increasing number of self-centered economic interests, and that each interest seeks naturally to entrench itself and to perpetuate itself. The pressures of these interests in the hospital, as in any business or industry, become a blind force. These pressures will make the enterprise their pawn unless it has a mechanism to cope with them.

The hospital has no such mechanism. Let us go into any department store. We can go to the superintendent's office. What is his job? He is responsible for the management of the physical establishment. Between him and the board of directors is the president. He, not the superintendent, is the key figure in the managerial apparatus. The president has the responsibility for maintaining proper relationships with the employees, the customers, the public at large, the board of directors, the press, and the stockholders. He may delegate his powers, but the ultimate responsibility is his. It is his job to keep an eye on trends, and to make all adjustments necessary to maintain the store's competitive position as regards prices, profits, as well as public relations.

Let us go into any hospital. There is the superintendent. He too is responsible, more or less, for the management of the physical establishment. Who is there between him and the governing board? In name, a figurehead; in reality nobody.

Let us go to the city that has an organized City Hospital Council. Is the situation different? It is not. You cannot get anything new by putting in more of the same thing. And the City Hospital Council is more of the same thing, a few steps removed.

It is not my intention to be critical of our hospital superintendents, or to accuse them of having failed the hospitals as executives. Few if any executive powers are delegated our hospital superintendents. I do not know a single hospital superintendent who has the authority to act in matters involving the medical profession "according to his best lights and judgement." In too many cases even the administrative responsibilities of our hospital superintendents are limited by many checks, reservations and frustrating impediments.

Many of our hospital superintendents might well prove astute and competent executives—if given the chance, that is. The shortcoming we are concerned with is not in the hospital superintendent. It is in the concept of the hospital, and of hospital administration, on the basis of which the governing boards are trying to run our voluntary hospitals.

Of course, this shortcoming has no importance, and may even lack meaning, if we are interested only in the hospital as such. We are interested, however, in a specific type of hospital, not just any kind of hospital. The hospital as a mechanistic and inevitable product of medical progress has an assured future. A glance at the hospital's inevitable future may cast some light on the odds, for and against, that the type of hospital we want, the voluntary hospital, can survive.

The hospital is already the major workshop, as well as the show window, of the medical profession and of all the allied professions, trades and industries. Within the next ten to twenty years we will see the hospital's importance become overwhelming.

Medical science is beginning to make really serious advances beyond the concepts and instrumentation of chemotherapy. Physics and biophysics have already opened to us astonishing vistas of new diagnostic equipment, of new research technics and equipment, as well as of new therapeutic procedures and equipment. From what we have already seen there can be no question but that medical practice in the coming years will become almost totally dependent on costly and complex facilities that only the hospital, as a medical center, will be able to provide.

We are really at the dawn of a new era in hospital expansion. All that makes the fate of the voluntary hospital the more significant, for the fate of the voluntary hospital involves the fate of the medical profession. The individual practitioner will become more and more helpless as the social investment in the tools he needs increases. We can be sure that this investment will increase fantastically. Whoever controls the tools of medical practice must control medicine.

That's the perspective in which the survival of the voluntary hospital must be considered. The hospital as Government function involves merely an administrative problem. The voluntary hospital, dependent for its support upon a community effort, involves a gigantic managerial problem. A public dissatisfied with the way the Government is running the hospitals cannot refuse to pay taxes. A public seriously dissatisfied with the voluntary hospital means its end.

We are before a dynamic situation. A combination of forces, scientific, medical, social and economic, are shaping the new hospital at an accelerated pace. These forces are deterministic. We cannot go against them. Nuclear physics and electronics, like the public interest in health and the desire of all mothers to have their babies in hospitals, are some of the deterministic forces that make up the matrix of the new hospital. However, within this deterministic scheme we have a choice. We can let the dynamics of the situation shape their own economic base. That would be the individualistic solution. Each of us will seek only to get the most possible out of each turn in the situation. Or we can choose through a united effort to influence the situation, with the end in view that the hospital, however it is shaped as a public medical instrumentality, will have the social and economic base preferred by us.

But we cannot assume a purely individualistic and exploitative attitude toward the situation and expect a preferred result that can be achieved only by means of a conscious and united effort. For this much is already clear. We have a hospital crisis because the situation, as it is developing, is partly unfavorable to the voluntary hospital. If we are to save the voluntary hospital, we must face the conditions working against it and find the ways and means to overcome them.

Let us glance at some of the conditions working against the voluntary hospital. The physician and surgeon make up the dominant self-interested economic group in the hospital. It is of the greatest concern to them that the private practice of medicine be perpetuated. That involves the voluntary hospital. There should be the closest working harmony between this group and the hospital.

However, as we all know, no such working harmony exists. We have no such harmony because we have no common idea of the hospital sufficiently compelling to provide the base for the discipline both need to work in harmony. Impulses that spring largely from unclarified self-interest cannot serve as the source of the vision of the hospital we need here. The hospital has no really clear notion of its role. It has been unable to project the idea of the key role it is playing in terms that the physician and surgeon could find significant for their discipline. It has been unable to do that because nobody in the hospital has tried to give it an integrated meaning to all who work in it.

Unfortunately, the position of the physician and surgeon is not even neutral. The individualistic practices and attitudes of both, as well as the attitudes of members of the medical profession outside the hospital, are seriously hindering the hospital from making those adjustments its survival demands. We have a beautiful example of an economic interest, for lack of a clarified attitude, destroying the conditions necessary for its own survival.

The dynamics of the situation are also confusing and dividing the medical profession. For lack of leadership the hospital is made the tool, in too many cases, in the partisan and purely selfish clashes between the different medical groups and personalities. In other words, the hospital has not only failed to impress upon the medical profession the clear mutuality of interests that should unite them in a common effort, it has failed as well to save itself from the confusion and the cutthroat attitudes prevailing within the medical profession.

Worse, whenever they can, and in every way possible, the hospitals pit their own unclarified economic impulses against the unclarified economic practices of the medical profession. Constantly under pressure, they seek solutions through corporate practices which antagonize and alarm the medical profession. Hospital spokesmen, some of them doctors, will use the public press to blast at some of the medical specialties. The specialties will blast right back.

The serious personnel problem the hospital faces has not been solved. Nor is it in process of really being solved. If the hospital shows itself helpless where positive action is called for, the hospital bureaucracy has become visibly enchanted with the green pastures it sees beyond the open doors of the Federal Treasury. Getting on the Federal gravy train is easier than winning the public support the hospital needs. It is true that a great many of the doctors are pushing the hospitals in that direction. But it cannot be denied that some of our friends in the hospital are not waiting to be pushed.

There is the public. Nearly 50 million Americans are covered by hospitalization insurance. Here is the broad base and the readily available base for the support the voluntary hospital needs. But the public is being systematically confused and puzzled, when not disgusted, by the introversions and curious practices of the voluntary hospital. The result is that this unprecedented interest in hospitalization is being turned, little by little, into another deterministic force that is pushing us slowly in the direction of large-scale Government intervention in the hospital.

It is obvious that nearly all in the hospital picture, as far as saving the voluntary hospital is concerned, are working at cross purposes. At the same time the situation is developing in a manner increasingly unfavorable to the voluntary hospital. There is very little we can do about it, because there is no instrumentality within the hospital that we can work with. No matter where we begin, no matter how we approach the problem, no matter what remedy we might have in mind, we shortly run up against this frustrating fact.

What is involved is much more than the vulgar question of whether medicine should be practiced on one economic principle or another. What is really involved is the most important issue of our times. It is this. Facing the problems of our times, what can we devise to permit the inescapable increases in the functions of Government without increasing the powers of Government. To let the Government take over the hospital, and thus establish economic control of medicine, would not mean a simple increase in the functions of government. It would amount to a fateful increase in the powers of government. An increase that should make us shudder.

We have a cause. If stated properly, it can be made significant to the majority of Americans. We have potentially favorable conditions. The majority of Americans still prefer the voluntary hospital. We have the advantage of a phenomenal interest in hospitalization. Moreover, pride in the voluntary support of community institutions is a deeply ingrained native quality.

We have all that. A sound approach to public relations offers us tested methods for the job to be done.

But the hospital lacks the managerial or executive apparatus for the job. Under these circumstances the voluntary hospital can only continue the ineffectual publicity practices it naïvely perpetrates in the name of public relations. These practices will suffice, for a few more years at least, to give voice to, if not relief from, the perennial agony of the deficit.

Can we bridge the gap between the governing board and the superintendent with the necessary executive apparatus? Can we arouse sufficient interest among all concerned to give the hospital the executive leadership its survival clearly demands?

These questions, as I see the situation, go to the heart of the hospital problem.

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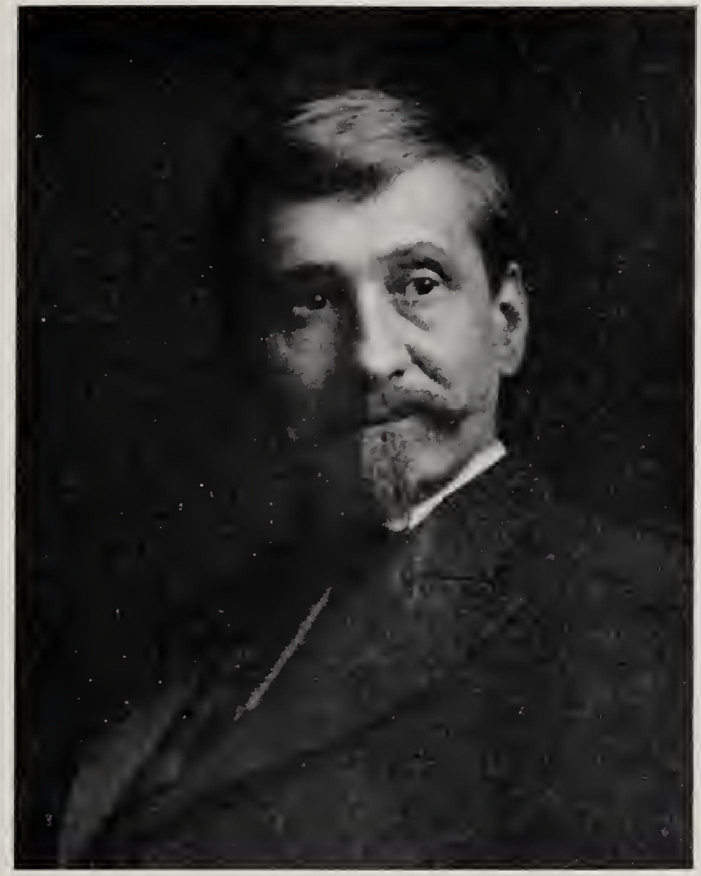
726 Jackson Place, N.W.



XL. SWAN MOSES BURNETT, M.D., Ph.D.

Although to his friends and associates Dr. Swan M. Burnett was known as a man of ability and distinction in his own right, an additional touch of interest was afforded by the fact that at one time he was the husband of Frances Hodgson Burnett, the talented authoress of the story "Little Lord Fauntleroy," which was the sensation and best-seller of its day.

Dr. Burnett was born March 16, 1847, in New Market, Tennessee. He was graduated as M.D. from Bellevue Hospital Medical College in 1870, and received the honorary degree of Ph.D. from Georgetown University in 1890. He practiced medicine in Knoxville, Tennessee, until 1876; and in 1875–76 he took a postgraduate course in ophthalmology and otology in London and Paris.

In 1876 he removed to Washington, D.C., where for the remainder of his life he engaged in the practice of ophthalmology and otology. He was Lecturer and Professor of Ophthalmology and Otology in the Georgetown University Medical School from 1878. He was one of the organizers of Emergency Hospital, in 1881, President of its Staff, and connected with it until his death; he was also a member of the staffs of Children's, Providence, Georgetown University, and Episcopal Eye, Ear and Throat Hospitals.

(*Continued on page 604*)

NEW CANCER DETECTION CLINIC AT GEORGETOWN

Georgetown University Medical Center opened its new Cancer Detection Clinic on September 7, 1948. It is located in the Outpatient Department on the second floor of the Georgetown University Hospital at 3800 Reservoir Road. Operating under the plan approved by the Medical Society of the District of Columbia, it is intended for those individuals who have no known symptoms of cancer but who are seeking routine check-ups to ascertain whether or not they have any malignant tumors.

The Reverend Paul A. McNally, S.J., Director of the Medical Center, has appointed Dr. John C. Sullivan, of the Department of Medicine, Director of the Clinic. A committee composed of Dr. Charles F. Geschickter, Dr. Harold J. Jeghers and Dr. Murray M. Copeland will be responsible for its operation. In addition to Dr. Sullivan, the Clinic will be staffed by other members of the faculty of Georgetown University Hospital and Medical School.

The Clinic will be open Tuesday and Thursday afternoons from 3 to 5 p.m. Appointments may be made by calling Ordway 4000, Extension 484, or by writing to Georgetown University Hospital, Cancer Detection Clinic, care of Social Service Department, Washington, D. C. The fee for examination is $15.

Supplemental funds for staffing and equipping the Clinic have been received from the District of Columbia Chapter of the American Cancer Society. Some special equipment for both the Cancer Detection Clinic and the Tumor Clinic was made available by a special grant from the U. S. Public Health Service.

Operation of the new Clinic, Director McNally said, is in accord with the desire of the Medical Center to coöperate with both national and local organizations in preventing and if possible eradicating one of the greatest human scourges.

CALENDAR OF MEETINGS

August	9	Committee on Public Health Exhibit, Annual Scientific Assembly
August	10	Committee for Health and Research (formerly Washington Federation for Public Health Education and Research)
August	20	Committee on Cancer Control
August	23	Executive Board Board of Censors Committee on Medical Service, Medical Service
August	25	Committee on Sports
August	26	Committee for Health and Research
August	30	Program Committee
September	1	Committee on Public Relations
September	7	Committee on Attendance, A.S.A.
September	8	Committee on Publicity, A.S.A.
September	10	Committee on Public Meeting, A.S.A. Committee on Social Affairs, A.S.A.
September	13	Board of Trustees, Medical Service
September	14	Registered X-ray Technicians of Washington
September	15	Program Committee
September	17	Graduate Nurses' Association
September	20	Committee on Medical Care in Public Institutions
September	21	Executive Board D. C. Medical Technicians
September	23	Committee for Health and Research

MEETINGS

Wednesday, November 17

PANEL DISCUSSION ON SUPPURATIVE PULMONARY DISEASES

"Pulmonary Abscesses," ROY G. KLEPSER, M.D.

"Bronchiectasis," BRIAN BLADES, M.D.

"Congenital Cystic Diseases of the Lung," EDGAR W. DAVIS, M.D.

"Diagnosis of Suppurative Lung Lesions," JAMES J. FEFFER, M.D.

"Recent Advances in Medical Therapy," SOL KATZ, M.D.

Wednesday, December 8

The following program will be presented:

"Meningococcic Infection," WORTH B. DANIELS, M.D.

"Treatment of Nonmeningococcic Purulent Meningitis," LEWIS K. SWEET, M.D.

"Peritonitis," CRENSHAW D. BRIGGS, M.D.

Wednesday, December 15

SYMPOSIUM ON PEPTIC ULCER

"Surgery of Gastric Ulcer," PAUL KIERNAN, M.D.

"Medical Management of Peptic Ulcer," MATTHEW WHITE PERRY, M.D.

"Vagus Resection of Peptic Ulcer," WILLIAM MERCHANT, M.D., Mt. Alto Veterans Hospital.

"Complications of Peptic Ulcer." Speaker to be announced.

MEDICAL ECONOMICS AND PUBLIC RELATIONS*

HERBERT P. RAMSEY, M.D., F.A.C.S.

Washington

The title furnished for these remarks could suggest two separate subjects to be dealt with at the same time; or it could imply that they are closely related.

The latter is the truth; for ignorance of the economic implications of medical care leads inevitably to progressively worse relations with the public. Such ignorance expresses itself through misunderstanding and brings up such undesirable epithets as "laissez faire" and "the public be damned!"

The controlling principle is, and must remain: In what way can the medical profession best serve the health interests of the people? Any statement short of this high purpose is, in the long run, foredoomed to failure.

The theme will be developed under three prinicpal headings—somewhat geographic in nature: (1) national and international; (2) local; and (3), possibly most important, personal.

I. NATIONAL AND INTERNATIONAL

Few physicians realize the extent of the National bill for health and the care of illness; and, in fact, I cannot say whether $2,000,000,000 or $6,000,000,000 per annum would be nearer.

Digression should be made here to distinguish between health and the care of illness. Both are, in part, scientific projects. Health involves all the factors that promote health and prevent disease; it includes the health status of parents before a child is born; its environment later, including its economic surroundings, and its opportunity to grow normally to a normal adult life and productiveness; sanitation, light, air, recreation of body and mind, education; and, importantly, other preventive measures such as immunization, isolation, epidemiology, safety requirements of all kinds—all these go into the promotion of health.

The care of illness, on the other hand, seeks to remedy or alleviate the damage that is done, whether it be from infectious, metabolic, degenerative, or other type of disease, or from accident or injury.

An understanding of this matter apparently is not possessed by those who have made wild charges about the quality of medical care in this country basing their charges on Selective Service rejection figures. Selective Service undertook to find a body of men ready to fight and set up certain standards based upon this requirement. A healthy man with a certain finger missing might easily mean that he had had good care at the time of his earlier misfortune, but was now alive and healthy consequent to that care. Dr. Maurice Friedman [1, 2] of this city has spent much time debunking the popular myths that have been bandied about regarding Selective Service rejections. He asks: "Is a corpse healthier than a rejectee with diabetes?" Furthermore, Dr. Howard Rusk, now of New York City, and many others have shown that handicapped individuals, even in extreme cases, may be made useful and happy members of society with material reduction of their degree of dependency.

Returning to the subject of preventive services, it is often charged that the medical profession is interested only in the care of illness and disinterested in preventive medicine. The reverse, of course, is true. Most preventive measures have been devised through the researches of medical men. And for a long time the profession has been closely allied with the development of our national health services and organizations. In fact, the activities of the various councils and bureaus of the AMA attest to this fact in detail.

Now the payment by the American people of the National bill above mentioned is made chiefly in three ways:

1. Through taxes at all levels. *Hospitals* (the magazine of the American Hospital Association) in January, 1948 reported that for the previous fiscal year the Federal Government alone spent for hospitalization and medical care (excluding construction) $1,050,000,000.[3] Dr. Daniel Blain[4] reported earlier that in the fiscal year 1947 the Veterans Administration alone was spending for medical care $1,400,000,000. Add to such costs the tax cost in state, municipal and county hospitals for the indigent, tubercular, neuropsychiatric, and other groups of patients, and one can visualize the

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* The fourth lecture in the Orientation Course for new members of the Society, April 24, 1948.

enormity of the tax-supported costs of the care of illness—all of this leaving out any mention of health services, health departments, the USPHS and other tax-supported health services.

2. The second method of payment is through contributed funds. These are voluntary contributions to National and local organizations like the American Cancer Society, the American Red Cross, the National Foundation for Infantile Paralysis, the National Tuberculosis Association, and many others; to local community funds, Community Chests, hospitals and foundations; and direct payments for the care of others. No estimate is at hand on costs paid by contributions, but it must exceed or come close to $1,000,000,000 annually.

3. Personal or group purchase of service is the third method, whether on a cash, postpayment or prepayment basis.

The traditional method of payment for medical and hospital service was on a cash or postpayment method, and much of it will continue on this basis. Time and study have shown that catastrophic illness may bankrupt an individual or that the prospect of the cost may result in his not seeking the care he needs. Furthermore, the continuous development of new methods, new gadgets, and new drugs, while making medical care better, have also made it much more costly. Recently, inflation also has added greatly to these costs.

These developments have given rise to consideration of the insurance principle, a device intended to spread the costs over a group of people by prepayment. This principle has been given an extensive work-out in the Blue Cross hospitalization plans and, in general, has been of great value to the subscribers. Over 27,000,000 persons in 47 states are now covered by 81 hospitalization plans. The value to hospitals has been great also—but, recently, rising hospital costs have made it difficult for the plans to keep pace without raising their premium rates to the subscribers; and many plans have already drawn heavily on their reserves.

I digress again to say a word about cost of hospital operation. Leaving out tax-supported hospitals, most hospitals are the so-called "voluntary" or nonprofit hospitals. A hospital has nothing to give. The hospital does not treat patients—physicians do that. But hospitals are necessary to that treatment and must be kept open. It follows then that hospitals must recover their costs from, or on behalf of, all patients they serve. In 1936 the average cost of bituminous coal per ton F.O.B. was $4.15, but in 1946 was $5.65, an increase of 36 per cent;[5] and between October 1937 and October 1947, the monthly index of wholesale prices for drugs and pharmaceutical supplies increased 61 per cent, while in the same period the wholesale index on foods increased 110 per cent!!!!! Twenty-five years ago salaries constituted about 30 per cent of a hospital budget, but now they are close to 60 per cent, while the 40 per cent balance of the budget has increased to reflect the increases in the price of goods just indicated.

The percentage of patients paying hospital bills over the counter has steadily decreased with the rise of prepayment plans and other insurance schemes, and the payment of contributions or tax refunds for the medically indigent; so that now in these ways somewhere between 50 per cent and 75 per cent of all hospital-patient days are paid *for* the patient instead of directly *by* the patient himself.

Hospital costs must always be a matter of community interest and are of especial interest to the doctors. This interest must keep alive his knowledge about the necessary methods of deriving hospital costs. He cannot afford to be aloof from the subject of hospital economics, but must strive to understand the nature of these costs and the ways they are to be met.

The use of the insurance principle has been extended in many ways: through organizations, lodges, and industrial concerns paying sickness benefits; through insurance companies which pay cash indemnities; and through the development of prepayment medical service plans.

Of the latter, 72 plans are now in operation in 42 states and many cities. The number of subscribers covered by these plans is now estimated to be in excess of 8,000,000. The form of the plans varies, but they all employ the insurance principle. Many of these plans are relatively new and their kinds of coverage are not necessarily as broad as they will become as actual experience is gained. Any plan to be successful must start on a limited basis until reserves accumulate and experience with the case load is acquired. No plan can succeed unless it is actuarially sound.

Much controversy has raged about the subject of compulsory sickness insurance (misnamed "compulsory health insurance"). The proponents of legal compulsion for all employed persons to take out prepayment insurance by means of the check-off (or payroll deduction) have for the most part been persons who saw political advantage in the proposition. However, many sincere socially-minded individuals have thought they see in it a panacea to bring medical care to all the people.

It is not proposed in this lecture to go into any extensive discussion of this subject, but the opinion of this writer may be summed up as follows: Whenever it can be shown that a government system of medical care will be better, I will be for it. But based on all we know about government in general and government medicine in particular, it is clear that government in these United States, whether it be Federal or state, cannot do it as well.

The Council on Medical Service of the American Medical Association is charged with the responsibility of encouraging the formation of, and the study of the results of, local medical service plans in states, counties, and cities. This Council maintains an AMA office at 1302 18th Street, N.W. headed by Dr. Joseph S. Lawrence.

Pursuant to action by the House of Delegates of the American Medical Association the Board of Trustees was active in forming a new corporation called Associated Medical Care Plans, Inc., to which is assigned part of the task of furthering the development of plans, setting up standards of acceptability in respect to such plans, and in helping to integrate them with each other in respect to those persons whose domicile does not remain in the same place.

More recently a new integration has been initiated between Associated Medical Care Plans, Inc. and the National Blue Cross Association. The National Director of this joint effort is Major General Paul R. Hawley, former Surgeon-in-chief of the European Theater of Operations, and more recently the Medical Director of the Veterans Administration.

One should not lose sight of the fact that insurance, whether voluntary or compulsory, will not provide care for the unemployed and the indigent, and some sort of subsidy from Government (local or Federal) will be required to make insurance schemes cover them.

Regarding public relations on the national scene, what has been responsible for the amount of criticism leveled at the American Medical Association?

First, it must be recognized, as any director of public relations knows, that the only solid basis for good public relations lies in accomplishment! To strive by publicity to build up an organization, individual, or thing beyond its real worth is press-agentry. This is publicity, not public relations. Good publicity is one of the tools used to make accomplishment widely known and understood.

Now it must be admitted, and the public admits and acclaims it, that the scientific accomplishment of the members of the AMA has been unparalleled in the history of medicine. That the AMA has fostered and encouraged this is widely recognized.

Other forces, however, have given wide coverage to the slowness of American medicine to organize a positive program in medical economics and the distribution of the blessings of good medical care. They have pointed out the deficiencies of physicians, both as individuals and as societies. In the past they denounced the official position of the AMA as a negative force opposing their schemes in this field.

It was not until the House of Delegates met in Chicago in December 1945 that the House finally adopted a resolution calling for a positive program—a resolution written, by the way, in this building by our able secretary, Mr. Theodore Wiprud. Since that time the heat has been kept on by the pressure of physicians, and such a program is now steadily developing, some of it along the lines mentioned in earlier paragraphs. This, then, now furnishes the solid basis of continuing study and accomplishment that public relations men can build upon. If accomplishment lags, public relations will likewise decline.

On the international scene, last September representatives of the medical associations of 48 countries met in Paris and organized the beginnings of the World Medical Association. Several representatives of the AMA took an active part. For the present the executive office of the W.M.A. has been set up in New York City, and the proceedings are trilingual, English, French and Spanish. Much of the expense is being met by pharmaceutical companies. Russia did not join.

Several years ago representatives of the countries in the United Nations met in New York and set up the beginnings of a World Health Organization. The then Surgeon General of the USPHS represented the United States. Twenty-nine governments, including Russia, have ratified the agreement. Internationally, in the health field, this may be an agency for good public relations, and it may help protect this country from disease invasion from without.

II. The Local Scene

Among the obligations of the physician is that of being a leader in the community. The good doctor will be one whom others can admire and respect. The rest of the community expects its physicians to take a reasonable and healthy interest and part in community life, community organizations, and matters pertaining particularly to the health of the community. He is not a good doctor who says that these things are of no concern to him.

The Metropolitan Area of Washington, known to Washington business men as the "Washington Trade Area," consists of the District of Columbia and five contiguous counties, Prince Georges and Montgomery Counties in Maryland, and Alexandria, Arlington and Fairfax Counties in Virginia. Each of these six political jurisdictions has a medical society, and the District of Columbia, in addition to your medical society, has the Medico-Chirurgical Society for negro physicians.

This community has a number of hospitals. There is no hospital in Fairfax County; Alexandria has a voluntary nonprofit hospital, and Arlington, likewise, has a community hospital. In Montgomery County there are three community or church hospitals. In Prince Georges County there is a hospital, now owned and operated by the county, and a private hospital operated by physicians.

Within the District of Columbia there are ten so-called community or church hospitals (that is, voluntary nonprofit hospitals), including the two university hospitals. It is not clear at this time whether these universities intend to continue their hospitals on a nonprofit basis or to put them into the profit-making field for the support of their medical schools. Casualty Hospital, a privately operated hospital, along with Children's and Emergency, have had contracts for less-than-cost payments for patients who are the indigent wards of the city government. Most of these community hospitals have outpatient departments of some kind where dispensary service is furnished for the medically indigent and they have wards where similar inpatient services are dispensed. Doctors Hospital is operated by a stock corporation, owned chiefly by physicians and dentists, and its operations are taxable. Prince Georges County has a voluntary health center in Hyattsville, and there is a health center in Alexandria.

There are a number of smaller private institutions in the District of Columbia and environs which may be called private hospitals or nursing homes. The Metropolitan Health Council has recommended that all hospitals and nursing homes in the area be made subject to the licensing laws and requirements for hospitals.

From voluntary hospitals we go to official hospitals. The District of Columbia Government has Gallinger Municipal Hospital for the care of the medically indigent, but for some years Gallinger Hospital has been accepting patients for pay or part-pay of their hospital care, based on an income bracket schedule prepared in the office of the Budget Officer of the District of Columbia. The District also has a tuberculosis hospital and sanatorium at Glenn Dale and a hospital for ambulatory tubercular patients at 13th and Upshur Streets, Northwest. The Board of Public Welfare has a Home for the Aged and Infirm at Blue Plains, but this is not a hospital, being chiefly a custodial institution, not very well supported by appropriations. Freedmen's Hospital, operated in connection with the Medical School of Howard University, is a Federal Government institution, coming under the aegis of the Federal Security Agency. The Government Hospital for the Insane, commonly known as St. Elizabeths Hospital, is a Federal institution and accommodates psychopathic patients from the District of Columbia along with other classes of psychopathic patients under the care of the Federal Government. The Federal Government operates Mt. Alto Hospital under the Veterans Administration and its facilities are made use of by the Veterans Administration, chiefly for reference of patients for diagnosis and treatment from other centers. The Department of the Army operates the Army Medical Center and Walter Reed General Hospital, and the Department of the Navy operates the U. S. Naval Hospital at Bethesda, Maryland. The Veterans Administration operates an outpatient department between 18th and 19th Streets on H Street, N. W., and the U. S.

Public Health Service has just secured an appropriation for a 500-bed hospital, ostensibly for the purpose of studying chronic disease. Washington physicians will observe, as time goes by, to what uses this hospital is actually put.

In respect to admission to District of Columbia government hospitals, the Hospital Permit Bureau of the District Government processes applications for admission to Gallinger and Glenn Dale. Under present law, if the accounts for hospitalization set up in the Permit Bureau are not met by the patients in due time, it is possible for the Office of the Collector of Taxes to proceed against the patient in the same manner as for delinquent taxes.

Health Security Administration* is not, as one might imagine, a government organization but is a voluntary institution which serves the purpose of screening patients and making arrangements for their admission to the wards and clinics of voluntary hospitals. It is the practice of Health Security Administration, on finding patients who are able to pay something for medical care, to try to get them into the hands of private physicians. Health Security Administration is much more meticulous about this than the hospitals have shown themselves to be. Indeed, several years ago the staff of Garfield Hospital passed a resolution of confidence in Health Security Administration and called on the administrator to see to it that only patients certified by HSA were presented to them on their wards for free care. It is not known that the staff of any other hospital has taken a similar step. This agency is the channel through which funds contributed to the Federation of Community Chests for hospitalization are paid to the hospitals to the extent of the funds available. While the community at large, meaning the metropolitan community, is contributing something like $400,000 or $450,000 annually for this purpose, the physicians of the community are contributing their services to the valuation of possibly four or five million dollars annually. However, it is neither good public relations nor good community spirit for a physician to consider that in giving free services he has no community obligation to give funds as well. The funds given to the Federation of Community Chests are utilized not only for hospitalization but for many other welfare agencies, both health agencies and otherwise.

Group Hospitalization, Inc. covers more than 250,000 subscribers in this area. While it is not closely integrated with *National* Blue Cross, it affiliates well with other agencies of the same kind in other communities. Group Hospitalization is a nonprofit agency, and is, at this time, selling to its subscribers the Medical Service Plan set up by this Medical Society. This Medical Service Plan has just commenced to function, and has been set up on a limited basis for the present in line with the reasons mentioned earlier in this paper.

The Hospital Council of the National Capital Area is an association of the hospitals throughout the Metropolitan Area, intended originally to act as a planning body in the field of hospitalization and hospital economics.

The Washington Metropolitan Health Council is a planning body intended to assist in the coördination and integration of all health agencies and hospitals, both official and voluntary, throughout this Metropolitan Area. While many physicians have given valuable assistance to the activities of the Health Council, there are only two or three physicians, I think, found among the representatives of hospitals on the Hospital Council. In the Metropolitan Health Council the agencies represented are the six official health departments of the area, and nearly all of the voluntary health agencies whose names are familiar to you, such as the Instructive Visiting Nurse Society, Social Hygiene Society, the Tuberculosis Association, the Red Cross chapters, Society for the Prevention of Blindness, chapters of the American Cancer Society, the Society for Crippled Children, the heart associations, the diabetes associations and many others too numerous to mention here.

The Health Department of the District of Columbia, like the health departments in most places, is charged with many different kinds of responsibilities: inspection of places where food is produced and sold, milk scoring, school health, sanitation, sanitary inspections, prevention of the spread of contagious diseases including tuberculosis and venereal diseases, public health nursing, maternal and child welfare, and so on. While the medical profession of the District has manifested keen interest in many of the activities of the Health Department, it might be pertinent at this time to say that, in my opinion, they have never grasped very well the opportunity to be actively interested in the subject of school health, school medical examinations, school medical inspections, and the like. A golden opportunity is thus being lost, and this could furnish a fertile field for the activity of some of the committees of this medical society and of its individual members.

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* Now known as Hospital Service Agency of the National Capital Area.

Coöperation between the medical profession and the Health Department is essential to community health. Neither the Health Department nor the medical profession may consider itself the sole custodian of the people's health. The medical profession should see to it that it coöperates to the fullest extent with the Health Department, and should also see to it that the Health Department coöperates in full with it. At times in the recent past there has been some question as to how full this coöperation was on both sides. The medical profession cannot truthfully look upon the Health Department as a thing apart, but it should look upon it as a department in which it, the medical profession, has responsibility and whose direction it should, in the light of its scientific knowledge, endeavor to influence. The medical profession has a positive responsibility to the public at large to manifest this active interest in all the activities of the Health Department.

In all the agencies mentioned there is a place for you to work in addition to the requirements of your daily practice with patients. The sooner that we get a large body of the younger and energetic physicians well informed about, and actively interested in, such civic and professional agencies, the sooner will the community be on the way to a better day for health in this area.

III. The Physician Himself

What of the public relations and what of the economics of the doctor himself? We now come to the most important phase of this discussion, namely, the position of the individual physician and his responsibility.

Two weeks ago you heard a discussion of medical ethics, and it is not proposed at this point to go over that discussion again. It will be sufficient to reemphasize that all that goes to make up the principles of medical ethics goes also to make for good public relations.

No matter what one may say of the public relations of the American Medical Association, or of any other organized group of physicians, all of this is but microscopic in importance when compared with the results of the day-to-day activities of the doctor. He is the most potent force, good or bad, in the public relations of the medical profession. If he be informed and able, his confreres will share his glory; if he be ignorant or indifferent, they will share the blame. If he be generous with himself their stock will rise, but if he be selfish it will decline.

The great majority of complaints which come before the Grievance Committee of this Society have to do with real or fancied overcharge by the physicians. This will require, therefore, some discussion of the economic relation between the doctor and his patient.

First of all, it must be maintained that the doctor is worthy of his hire. When the doctor has built up his practice it should produce for him sufficient income to keep him an effective doctor for his patients. It must provide him some time for leisure for a dual purpose: (1) for reading and self-advancement in his science, and (2) for relaxation and rest from the physical, mental and emotional strain incident to day-and-night grappling with the responsibility for the lives and health of the patients who have entrusted themselves to his care. Without leisure for self-advancement his practice may degenerate into a prescription practice. Without leisure for relaxation from tension, his health and his good judgment will decline. On the other hand, every physician who is obsessed with a desire to get rich quick and to have his leisure before he has earned it brings opprobrium upon himself and other physicians who do not so conduct themselves.

For a full understanding of this matter, it is necessary for the physician to put himself in the place of his patient and think for a moment as to how he would react to the situation in which he finds himself. Physicians do not like to hear patients complain about the size of their bills, and yet no one will yell more loudly than a physician at what he had to pay the plumber or an automobile mechanic, or anybody else who serves him. The thing that most commonly strikes the patient between the eyes is to receive a bill much larger than he expected. Most of the unhappiness and misunderstanding arising out of the matter of overcharge would be eliminated if each physician would make it his practice to let the patient know about what his expense was likely to be as far as could be told. It is not suggested that the physician should undervalue his services, but it is most strongly recommended that in the case of fees, whether for office calls or for home visits, or for obstetrical or surgical procedures, an understanding, as far as possible, be had in advance as to what the cost is likely to be. This gives the patient an opportunity to discuss the matter if he feels he cannot meet the suggested expense and allows the doctor the opportunity to be magnanimous and make some discount on what he had planned to charge.

It is not beneath the dignity of the physician or of his secretary to discuss frankly and pleasantly the situation when the patient complains of the size of the fee or complains of his own straitened circumstances. About two weeks ago my secretary placed the word "please" on an account for fifteen dollars which had gone unheeded for some months. By return mail a check was received and across the bottom of the statement was written "Thank you and goodbye!!" It would have been easy to forget the whole matter and drop the statement in the wastebasket and deposit the check. However, it was deemed wiser to send a little note which read as follows:

"DEAR LOUISE:

Our secretary has shown me your check and the notation you made on our statement of March 31st. I could not tell whether your note meant you were leaving the city or perhaps you were a little irritated about something.

The secretary is instructed in the case of any account on which there has been no activity for three months or more, to put the endorsement 'please' on the monthly statement. If you think you have been improperly billed, please let us know. For the present, we are holding your check in the office.

Very sincerely,"

By return mail a letter was received which read as follows:

"Thank you for your note. It was very generous of you to write it.

"I'm terribly sorry for, and ashamed of my hasty remark to you. Bill would beat me if he knew of it. I was the old patient, slow but sure—but if I had stopped to think I wouldn't have felt hurt—things just came too thick and fast at that time and I realize now that I should have called your office and explained that my payment would be slow. It's all right now. Please forgive me."

Too many physicians antagonize patients unnecessarily by not undertaking to find out and discuss with them any possible source of dissatisfaction.

If the dissatisfaction should relate to the care given by the physician he should be frank enough to say, "I feel that you do not have confidence in our management. I think this is bad for you. Tell me whether this is true so we can discuss it."

The other complaint made against physicians is that the physician will not disturb himself very much. He does not want to go out at night, he does not want to see anyone out of his office or the hospital. After all, the only way a young physician creates a practice is by demonstrating to his patients that he is willing to extend himself on their behalf. The young physician must give each patient more care than the condition warrants until his confidence and reputation in the community have been established. Having established such a confidence, however, and such a reputation, it is not in character for the physician then to abandon the interest of his patients in the now greater interest of his leisure. Only when the demands of his health make it so should he succumb to that necessity.

Attainment in the medical field, as in other fields, rests upon hard work and long and arduous endeavor. Apparently many young physicians these days wish to start out on an advanced scale of living without having gone through with the preliminary stages of work and effort.

"I cannot get a doctor at night," "my baby had a fever and my doctor said bring him to my office next Tuesday"; more often such complaints are against individual doctors but they react to the detriment of our whole profession, including that large number of physicians who do respond to the calls and do what they can under the circumstances.

Economically, the so-called "war honeymoon" is over. The days of striking-it-rich quickly have gone and from now on every doctor will earn what he gets.

The general practitioner is the backbone of the medical profession. Various factors have combined to make some younger physicians think that he must become a specialist. As a result of this, some specialties are overcrowded while the neighborhoods are crying out for good doctors. In a given length of time from the completion of one's medical education, the general practitioner is, as a rule, surer of acquiring an economic competence than one who goes through the hazards of trying to establish in a specialty. The present trend toward the reëmphasis of general practice is a happy one, both for the medical profession and for the public at large. More and better trained general practitioners are needed in every community. These are the ones who know the patient and his whole family and his background. These are the ones to whom the patient will naturally turn in time of distress. Nevertheless, let it be said that any specialist who fails to treat the patient as a whole person, with an interest in him as such, and attempts to treat him only as a disease, or as a condition, falls short of his opportunity and obligation as a good physician. It is to be devoutly hoped that the present trend toward the establishment of sections of general practice in community hospitals will soon catch on in Washington, and that our general hospitals will establish sections on general practice.

Let no one assume that because we have dwelt upon the shortcomings of the doctor that there is not a business side to medical practice. The business side of medical practice should be perfectly straightforward and understanding. As to this subject, I could do no better than to refer you to the admirable book, under the title of "The Business Side of Medical Practice," written by our secretary, Mr. Theodore Wiprud, now going into its second edition. This is not intended to be a "book plug" but a reference from which you can get a great deal more than I could get into this lecture this afternoon.

You heard about malpractice last week; I will only say, be sure you carry professional liability insurance.

In the past, the doctor was looked up to not only as a leader in the community but as a man of education and culture. No less is it to be expected today that the doctor should be such a person, a person who can be admired and respected as one whom the patient can credit with an intellect and a certain amount of culture. It is not necessary that the doctor assume a false dignity. No better word was ever given in advice to the young physician than the old dictum "Be yourself." However, one must wonder in the days of the very specialized, technical education required both in premedical work and in medical schools these days what has happened to the general educational background of the doctor. I have been teaching students in the senior class of medical school for the last twenty years. It is a never-ending source of amazement to me to find that after having been through kindergarten, primary schools, secondary schools, college or premedical school, and medical school to their senior year, that many of these students can still not make good use of the English language or even know how to spell the words.

There never was a time when there was more demand for intelligent, well-informed and well-balanced thinking on the part of the physician than there is at this time. I have gone into print on several occasions, calling for the more active participation of younger physicians in the councils of medical societies and of the American Medical Association. This campaign is being continued at this time. I refer you to the MEDICAL ANNALS for February, 1948, page 108, titled "1948—and the Board of Trustees, AMA." In this Society, please count yourself in—no one can count you out but you yourself.

And so today we come with our plea to you—our newer members—that we all join hands in a common effort to make each one of us, the physicians of Washington, not merely technically, but in the highest and broadest sense of the term, "the good physician."

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News and Personals

The American Public Health Association will convene for its 76th Annual Meeting in Boston, November 8–12. Representatives are expected from all parts of the United States, from Canada, Cuba and Mexico, and from Latin American countries. Delegates from Europe and Asia are also expected. A number of related organizations will hold their annual meetings concurrently. Full information may be secured from Dr. Reginald M. Atwater, Executive Secretary of the Association, whose office is at 1970 Broadway, New York 19, N. Y.

The Section on Radiology will hold a regular business and scientific meeting, Thursday evening, October 21, at 8 p.m. in the Medical Society's auditorium.

The Section will hold a special meeting in the Society's building, October 28, when Dr. James F. Brailsford of Birmingham, England, will be present to speak on "The Effects of Trauma on Bones and Joints." All members of the Medical Society of the District of Columbia are cordially invited to attend this meeting.

The American Goiter Association again offers the **Van Meter Prize Award** of $300 and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The Award will be made at the annual meeting of the Association, which will be held in Madison, Wisconsin, May 26–28, 1949, providing essays of sufficient merit are presented in competition.

The essays may cover either clinical or research investigations; should not exceed 3,000 words in length; must be presented in English; and a typewritten double spaced copy sent to the Corresponding Secretary, Dr. T. C. Davison, 207 Doctors Building, Atlanta 3, Ga., not later than March 15, 1949.

The essay will be published in the annual Proceedings of the Association. This will not prevent its further publication, however, in any journal selected by the author.

The first meeting of 1948–49 of the **Section on Neurology and Psychiatry** was held on October 7 in the Medical Society's Library. Following a short business meeting Dr. Walter Freeman, who recently returned to Washington after attending the International Conference on Psychosurgery in Lisbon, Portugal, spoke on "Europe Looks Forward."

The Philadelphia, Baltimore and Washington Neurological Societies will hold their annual Tri-City meeting on Friday, October 29, in the District Medical Society's auditorium at 3:30 p.m. The following papers will be presented by Washington physicians:

"Effect of Experimental Manipulation of Ward Milieu on Excited Patients," Dr. Alfred H. Stanton
"Newer Developments in Phantom Limbs," Dr. John P. Gallagher
"Histological and Roentgenological Correlations in Intracranial Meningiomas," Dr. John W. Hope
"Europe Looks at Psychoanalysis," Dr. Walter Freeman
"Report on International Congress on Mental Hygiene," Dr. Robert Felix

Physicians from Baltimore and Philadelphia will lead the discussion of papers.

Following the meeting a subscription banquet will be held at the Mayflower Hotel, preceded by cocktails at 6:30 p.m. All neurologists, psychiatrists and neurosurgeons are cordially invited to attend.

The American Urological Association offers an annual award of $1,000 (first prize, $500; second prize, $300; third prize, $200) for essays on the result of some clinical or laboratory research in urology. Competition will be limited to urologists who have been in such specific practice for not more than five years and to residents in urology in recognized hospitals. The first prize essay will appear on the program of the meeting of the American Urological Association, to be held at the Biltmore Hotel in

Los Angeles, May 16–19, 1949. Essays must be in the hands of the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis 3, Tenn., before February 15, 1949. Dr. Moore will be glad to furnish full particulars regarding the contest.

The South Atlantic Association of Obstetricians and Gynecologists announces the establishment of the Foundation Prize. Authors of papers on obstetrical or gynecological subjects who desire to compete for the prize may obtain further information by writing to Dr. E. D. Colvin, Secretary-Treasurer, 1259 Clifton Road, N.E., Atlanta, Ga.

The annual **Postgraduate Course in Ophthalmology and Otolaryngology** of the University of Virginia Medical School, Charlottesville, will be held on November 30 and December 1 for Ear, Nose and Throat, and on December 2 and 3 for the Eye. The fee for the course is $25 for four days or $15 for either part of the course. Hotel accommodations may be secured at the Monticello Hotel or the Albemarle Hotel in Charlottesville.

Candidates who wish to be certified by the **American Board of Ophthalmology** may apply now for the 1950 written tests which are held annually in various parts of the United States. Applicants will be considered in order of receipt until the quota is filled. Registration is already closed for the test to be given in January 1949.

Practical examinations for 1949 acceptable candidates will be held in New York, June 11–15, 1949. Examination dates have also been scheduled in Boston, St. Louis and San Francisco.

Diplomates are urged to keep the Board office informed of all changes of address. All communications should be addressed to the American Board of Ophthalmology, 56 Ivie Road, Cape Cottage, Maine.

The Montgomery County Medical Society is holding its meetings this fall at the Manor Country Club, Norbeck, Md., preceded by dinner at 7:15 p.m. Dr. George T. Pack, Professor of Clinical Surgery, New York Medical College, spoke, September 21, on "Recent Advances in the Treatment of Gastrointestinal Cancer." His paper was discussed by Surgeon General Leonard A. Scheele, of the USPHS, and by Dr. Robert J. Coffey, Professor of Surgery at Georgetown University School of Medicine.

On October 19, Dr. A. Magruder MacDonald, Coroner for the District of Columbia, presented a paper on "The Duties and Functions of the Coroner's Office." Dr. F. J. Broschart, Coroner for Montgomery County, Maryland, was the discussant.

Dr. Brian Blades, Professor of Surgery, George Washington University School of Medicine, will be the speaker, November 16; his subject, "Tumors of the Chest." Following this talk Dr. Fred O. Coe will present the roentgenologic aspects of tumors of the chest.

The Executive Board, August 23, approved the appointment of **Dr. Robert H. Groh** by President Minor as physician-member of the Community Chest Federation Hospital Fund Committee.

A new **Committee on Medical Ethics and Deportment** was created. President Minor appointed the following members, with the approval of the Board, to serve on this committee: Dr. Frederick A. Reuter, Chairman; Dr. James Hawfield, Vice Chairman; Drs. Don Johnson, P. S. Constantinople, Philip J. Lowenthal, Leo B. Gaffney, Edward B. Tuohy, Leo Brison Norris and James A. Dusbabek.

Three members were appointed to serve on a **Community Chest Campaign Advisory Committee.** They are as follows: Dr. Hill Carter, Chairman, Dr. Henry A. Grennan and Dr. Aubrey D. Fischer.

The Board approved the participation of **Drs. A. Clagett Gray** and **Raymond T. Holden** in the Economic Mobilization Course which is being sponsored by the Civilian Admissions Committee of the Washington Board of Trade.

The essay contest sponsored by the **Section on General Practice** was also approved.

The Secretary of the Society reported to the Board that the Washington Federation for Health, Education and Research will henceforth be known as the **Committee for Health and Research.**

The Section on General Practice is sponsoring an essay contest among students in the 9th, 10th, 11th and 12th grades of the public and private schools in the District of Columbia. Its purpose is two-fold: to bring before the public the important place in community and family life which the family doctor has always held and should continue to hold, and to encourage students to study medicine for the purpose of becoming general practitioners.

The essays on the subject, "The Family Doctor," should not exceed 1,500 words. They must be written legibly with pen and ink or they may be typewritten, using one side of the paper only, and signed with the full name of the student, school, grade, age and home address. They will be judged on the basis of originality, and neatness will be an important factor. Upon completion, contestants should turn their entries in to the principal or his designated representative, who, in turn, will forward them to Dr. A. Clagett Gray, Chairman, Essay Contest Committee. All entries become the property of the Section on General Practice.

The following cash awards will be made: $100 first prize; $75 second prize; $50 third prize. There will be six honorable mentions with appropriate awards for each.

Members of the Society are urged to bring this contest to the attention of any students of their acquaintance who they feel would be interested in competing. Copies of the rules may be secured from the Executive Director of the Medical Society of the District of Columbia. The contest closes at midnight, January 15, 1949.

The American Congress of Physical Medicine held its 26th Annual Session at the Hotel Statler, September 7–11. At the formal opening exercises, Wednesday evening, September 8, addresses of welcome were given by the following: the Rev. Paul A. McNally, S.J., Dean of Georgetown University School of Medicine; Dr. Walter A. Bloedorn, Dean of George Washington University School of Medicine; Dr. Leonard A. Scheele, Surgeon General of the USPHS; Brig. General John Hargreaves, Deputy, The Air Surgeon; Dr. Arden Freer, Acting Chief Medical Director, Department of Medicine and Surgery, Veterans Administration; Rear Admiral H. L. Pugh, Deputy, The Surgeon General of the Navy; and Brig. General Silas B. Hays, Acting The Surgeon General, U. S. Army. At this meeting the President-elect, Dr. O. Leonard Huddleston, of Los Angeles, was inducted into office. His Presidential Address was entitled, "New Horizons and Current Problems in Physical Medicine."

ATTENTION! PHYSICIAN-VETERANS OF WORLD WAR II!

The Physician-Veterans of World War II of Washington are preparing a printed booklet of members in accordance with the vote at its last meeting. If desired, members will be identified under a specialty heading.

All physicians who were honorably discharged after serving in the armed forces during the Second World War are invited and urged to join this organization, whose objective is to secure mutual benefits for its members and to coördinate its efforts with those of the rest of the medical profession. Two regular meetings are held each year, one of which is always on Pearl Harbor Day, December 7.

Information and application blanks may be obtained from the Secretary-Treasurer, Dr. Eugene J. McDonald, 1150 Connecticut Avenue, N.W., telephone Sterling 4353. Any changes in the membership list which is now being compiled should also be directed to Dr. McDonald.

Many members of the District Medical Society participated in the General Scientific Session. Dr. Robert F. Dow, Consultant to the Surgeon General of the Army on Physical Medicine for Walter Reed General Hospital, spoke on "The Practical Aspects of Peripheral Nerve Injuries." Dr. Charles S. Wise, Director of the Department of Physical Medicine at George Washington University Hospital, gave a progress report on the development of the Department of Physical Medicine at the George Washington University Hospital and Medical School.

Dr. Wise, who is also Associate Professor of Physical Medicine at George Washington University School of Medicine, was among the lecturers for an instruction seminar. He discussed "Clinical Application of Muscle Strengthening Exercise" on September 10.

Listed among the discussants of papers were the following members of the Society: Drs. Dow, Wise, Dean M. Hayes, Frank Horvath, Emil J. C. Hildenbrand, William L. Howell and A. B. C. Knudson.

Dr. Hayes is Secretary of the Southeastern Section of the Congress and Consultant to the Surgeon General on Physical Medicine for the Second Army

Area. Others who assisted at the convention were Drs. Isadore Levin and Wayne McFarland.

The First International Poliomyelitis Conference was held at the Waldorf-Astoria Hotel in New York City, July 12–17, under the auspices of the National Foundation for Infantile Paralysis. According to Mr. Basil O'Connor, President of the Foundation, the conference was held "to pool and exchange independently gained knowledge about poliomyelitis, to evaluate findings, and to formulate future studies on an international scale."

Delegates from many foreign countries were present, as a list of the various presiding officers at the plenary sessions indicates: Dr. Oswaldo P. Campos, Rio de Janeiro, Brazil; Dr. Rustin McIntosh, New York City; Dr. Robert K. S. Lim, Shanghai, China; Dr. Arthur Steindler, Iowa City, Iowa; Professor Arvid J. Wallgren, Stockholm, Sweden; Dr. Carlos E. Ottolenghi, Buenos Aires, Argentina; Dr. James E. Paullin, Atlanta, Ga.; Dr. Pierre Lepine, Paris, France; Dr. Harry S. Mustard, New York City; and Dr. Frank George Boudreau of the National Research Council, Washington. The sessions were interpreted into Spanish, French, and German through a translation mechanism.

Dr. Carolyn Pincock, who was present from Washington, said she came away from the Conference with the feeling that "many people of many lands have the same problems and that by uniting together to fight a common foe, big strides toward conquering poliomyelitis can be made."

The American Federation of the Physically Handicapped met for its 4th Biennial Convention in Washington at the Roosevelt Hotel, August 20, 21 and 22. Dr. Walter Stokes, recently Chairman of the Medical Society's Committee on Public Relations, was asked to provide speakers in the fields of orthopedics, cardiology and neurology for the Panel Discussion on Medical Aspects of Rehabilitation, August 21, at which Dr. Ira D. Scott, Vice President of the Federation and Chief of the Vocational Advisement of Veterans Administration, presided. **Dr. Frank Hand** discussed the physically handicapped in the orthopedic field, **Dr. John A. Reisinger** in the field of cardiology, and **Dr. Harold Stevens** in the field of neurology, with particular emphasis on the epileptic.

Dr. Ross T. McIntire, formerly Surgeon General of the Navy, addressed the convention the same day on "The President's Committee on 'National Employ the Physically Handicapped Week.'"

On April 27 the Board of Directors of Health Security Administration adopted a resolution to change the name of the organization to **Hospital Service Agency of the National Capital Area.** This change in name became effective July 1.

At the request of the **Jewish Community Center,** the Medical Society is furnishing speakers for another series of health lectures for the public to be given this winter at the Center. Following is a list of the members who will speak and the titles of their talks:

November 16—"Sinus Infection," Dr. P. S. Constantinople
November 30—"Tuberculosis and the Washington Chest X-ray Survey," Dr. A. Barklie Coulter
December 14—"Conservation of Eyesight,' Dr. J. Thomas Schnebly
January 4—"Causes of Deafness," Dr. Victor Alfaro
January 18—"Appendicitis," Dr. Edward Cafritz
February 1—"Venereal Disease Control in Washington," Dr. S. Ross Taggart
February 15—"Preparation for Marriage and Marriage Counseling," Dr. Walter Stokes
March 1—"Epilepsy," Dr. Harold Stevens
March 15—"Is Alcoholism a Disease?" Dr. Michael Miller
March 29—"Hay Fever, Asthma and the Allergies," Dr. Eloise Kailin

Dr. Walter Stokes, Chairman of the Committee on Public Relations for 1947–48, was highly commended by Mr. Arthur B. Bernstein, Activities Director for the Jewish Community Center, for obtaining such excellent speakers last year. Mr. Bernstein stated that in view of the outstanding success of last year's series they would like to have a medical series each year.

President Marvin of **George Washington University** has announced the following promotions for faculty members in the School of Medicine:

Dr. Louis K. Alpert, from Associate to Adjunct Clinical Professor of Medicine; Dr. Seymour Alpert, from Fellow to Instructor in Anesthesiology; Dr. William S. Anderson, from Assistant Clinical Professor to Clinical Professor of Pediatrics; Dr. James E. Beattie, from Clinical Instructor to Associate in Surgery; Dr. George W. Creswell, from Associate to Assistant Clinical Professor of Dermatology and Syphilology; Dr. Charles S. Coakley, from Fellow to Assistant Professor of

Anesthesiology; Dr. Carl C. Dauer, from Clinical Instructor to Assistant Clinical Professor of Medicine; Dr. James A. Dusbabek, from Clinical Instructor to Associate in Obstetrics and Gynecology; Dr. Addison M. Duval, from Assistant Clinical Professor to Clinical Professor of Psychiatry; Dr. Clarence K. Fraser, from Clinical Instructor to Associate in Obstetrics and Gynecology; Dr. James Q. Gant, Jr., from Clinical Instructor to Associate in Dermatology and Syphilology.

Dr. James B. Harrell, from Associate to Assistant Clinical Professor of Surgery; Dr. Clarence R. Hartman, from Clinical Instructor to Associate in Medicine in the School of Medicine and Director of the Outpatient Department in the Hospital; Dr. Roy Hertz, from Clinical Instructor to Assistant Clinical Professor of Medicine; Dr. Vincent M. Iovine, from Adjunct Clinical Professor to Assistant Clinical Professor of Surgery; Dr. Dorothy S. Jaeger, from Associate to Assistant Clinical Professor of Pediatrics; Dr. Hayden Kirby-Smith, from Associate to Assistant Clinical Professor of Dermatology and Syphilology; Dr. Oscar Legault, from Fellow in Neurology and Neuropathology to Clinical Instructor in Neurology; Dr. George Maksim, from Associate to Assistant Clinical Professor of Pediatrics; Dr. Lloyd H. Mousel, from Clinical Professor to Professor of Anesthesiology in the School of Medicine and Chief Anesthetist of the Hospital; Dr. James P. Murphy, from Clinical Instructor to Associate in Neurological Surgery; Dr. Julius S. Neviaser, from Associate in Surgery to Assistant Clinical Professor of Orthopedic Surgery.

Dr. Andrew G. Prandoni, from Clinical Instructor to Associate in Medicine; Dr. Barton W. Richwine, from Clinical Instructor to Associate in Obstetrics and Gynecology; Dr. Leonard T. Peterson, from Clinical Instructor in Surgery to Assistant Clinical Professor of Orthopedic Surgery; Dr. Monroe J. Romansky, from Associate Clinical Professor to Associate Professor of Medicine in the School of Medicine and Assistant Director of Clinical Laboratories of the Hospital; Dr. William J. Schewe, from Fellow to Instructor in Pathology; Dr. William Stanbro, from Assistant Professor to Associate Professor of Radiology in the School of Medicine and Chief Roentgenologist of the Hospital; Dr. Carl H. Wells, from Assistant Professor to Associate Professor of Pathology.

Elected to membership in the **American Rheumatism Association** on June 19, 1948, were the following members of the District Medical Society, all of them members of the local Rheumatism Society: Drs. William Earl Clark, Milton C. Cobey, Alfred A. J. Den, Custis Lee Hall, Herman Hoffman, Isadore Levin, J. Lawn Thompson, William J. Tobin and George C. Wyatt.

Dr. Darrell C. Crain was reappointed Chairman of the Committee on Affiliated Units of the Association and elected to permanent membership on the Association's Editorial Board, which publishes the *Rheumatism Reviews* appearing in the *Annals of Internal Medicine*. Dr. Crain states that the *Tenth Rheumatism Review*, which will review the literature on rheumatic diseases for 1946 and 1947, is now in process of preparation and will be published early in 1949.

Mrs. Edgar E. Quayle, President of the **Woman's Auxiliary to the Medical Society of the District of Columbia,** has appointed the following board members and committee chairmen to serve with her during 1948–49:

PARLIAMENTARIAN: Mrs. Thomas C. Thompson
HISTORIAN: Mrs. William J. B. Orr
MEMBERSHIP: Mrs. James E. Wissler
WAYS AND MEANS: Mrs Richard H. Todd
PROGRAM: Mrs. R. Stevens Pendexter
FINANCE: Mrs. Russell Edmonston
SOCIAL: Mrs. Richard E. Dunkley
PUBLICITY: Mrs. Marcel J. Foret
HOUSE: Mrs. Ernest E. Hadley
PUBLIC RELATIONS: Mrs. Samuel A. Alexander
PHILANTHROPIC: Mrs. Robert E. Moran
EDUCATION: Mrs. Arch L. Riddick
HYGEIA: Mrs. Leo. C. Varden

The new officers of the Auxiliary were announced in the June issue of the ANNALS. In addition to Mrs. Quayle, they are Mmes. Leon A. Martel, J. Chester Brady, Albert E. Marland, G. Louis Weller, Jr., and George H. Crofton. Dr. and Mrs. Quayle entertained the new officers and chairmen of the committees and their husbands at a Sunday night supper at the Congressional Country Club, September 19.

Dr. Thomas Parran, Surgeon General of the U. S. Public Health Service from 1936 to 1948, was presented the Distinguished Service Medal, September 3, by Secretary of the Army Royall in recognition of his aid and advice in developing the Army's wartime preventive medicine program. The citation read in part: "His advice and undaunted spirit as well as personal courage and capacity for eliminating frequent administrative obstructions aided in preventing widespread health deficiencies among our own civilian and military population, those of liberated countries and allies, displaced persons and enemy groups after they came under Army control."

Dr. Parran conducted a symposium on World Health Problems at the 100th Anniversary Meeting of the American Association for the Advancement of Science, held at the Statler Hotel, September 13–16. The general theme of the convention was "One World of Science."

Dr. Custis Lee Hall attended the Congress of the International Society of Orthopedic Surgery and Traumatology in Amsterdam, Holland, September 13–18, at the invitation of Dr. Henry W. Meyerding of the Mayo Clinic, Rochester, President of the Congress.

Dr. Ernest Sheppard, Professor of Ophthalmology at George Washington University School of Medicine, was invited to participate in the program of the American Academy of Ophthalmology and Otolaryngology in Chicago, October 11. He discussed a paper on "Intermittent Exotropia" by Dr. Richard G. Scobee of St. Louis.

Dr. Sheppard has been tendered an Honorary Professorship by the Gandhi Eye Hospital of Aligarh, India.

Dr. Lloyd Griffith Lewis has been appointed Professor of Urology at Georgetown University School of Medicine, succeeding Dr. William P. Herbst, whose resignation was announced in the July ANNALS.

Dr. Lewis, who graduated in 1928 from Johns Hopkins University School of Medicine, is a diplomate of the American Board of Urology. He was Instructor, Associate and Assistant Professor of Urology at Johns Hopkins University Hospital from 1933 until 1942, when he was commissioned Major in the Army of the United States, later serving as Colonel. He was Chief of the Urological Section of Walter Reed General Hospital from 1942 to 1946. For his services he was awarded the Legion of Merit in 1946. Following his discharge from service Dr. Lewis has served on the faculty of Georgetown as Associate Professor of Urology.

Drs. J. Ross Veal, John A. Shadid and William L. Jamison attended the 34th Clinical Congress of the American College of Surgeons in Los Angeles, October 18–22. As participants in a Forum on Fundamental Surgical Problems, they reported their research on "The Effect of Tetra-ethyl-ammonium Chloride on Peripheral Blood Flow."

Drs. Charles H. McEnerney, T. Tayloe Perry and Thomas McP. Brown have been appointed to head a medical advisory board to the District Foundation for Rheumatic Diseases. The Foundation plans to raise funds to establish training fellowships at George Washington and Georgetown Universities. Dr. McEnerney will serve as chairman of the advisory board, Dr. Perry as co-chairman, and Dr. Brown as chairman of research projects.

Dr. Warren Draper, who has served as Assistant Vice President for Health Services of the American Red Cross, was recently appointed Executive Officer of the Welfare Retirement Fund of the United Mine Workers of America.

Dr. Norman C. Shoemaker will head Montgomery County's 1948 Christmas Seal sale, which will begin November 22 and continue through Christmas. Dr. Shoemaker, who practices at 8005 Woodbury Drive, Silver Spring, Maryland, is an Associate member of the District Medical Society.

Dr. Samuel P. Hicks, recently elected to membership in the District Medical Society, writes that he is now living in Boston, having become associated with the Departments of Pathology and Neuropathology of the Harvard Medical School and New England Deaconess Hospital.

Theodore Wiprud, Secretary of the District Medical Society, was invited to address the National Association of Medical-Dental Bureaus at its annual convention at the Shoreham Hotel, September 23. Mr. Wiprud spoke on "Economic Trends in Medicine."

Mr. Wiprud was also a guest speaker, September 24, during the Orientation Course for first-year medical students at George Washington University School of Medicine. "Problems in the Distribution of Medical Care" was the subject of his address.

Frank Carey, science reporter of the Associated Press Washington bureau, won the 1948 George Westinghouse Science Writing Award in the newspaper class, which carries an honorarium of $1,000. His award was for a series of four articles on the new drug chloromycetin which appeared in Associated Press papers, July 27–30. Prizes and certificates were presented at a luncheon in Washington, September 16, during the centennial meeting of the American Association for the Advancement of Science, which administers the award.

Mr. Carey has become well known to many District physicians since he came to Washington as a science reporter in 1943. His articles on the Medical Society's Annual Scientific Assemblies have appeared in newspapers and magazines throughout the country.

Dr. Daniel F. Lynch and Dr. Karl Hayden Wood, members of the District Dental Society and Associate members of the District Medical Society, participated in the recent meeting of the American Dental Association. Dr. Lynch read a paper entitled "Management of Complications in Oral Surgery" and Dr. Wood presented a motion picture in technicolor and sound on "Treatment of Fractures of the Mandible and Facial Bones by the Use of the Open Reduction Methods."

Dr. Ray F. Guynn has been elected to membership in the American Psychiatric Association.

Dr. John A. Reed was in Boston, September 11, attending a committee meeting of the American Diabetes Association. Plans for Diabetes Week, December 6–12, were discussed. Dr. Reed says every state medical association and county medical journal will be contacted relative to the promulgation of a diabetes detection drive which will continue throughout 1949.

Dr. Edward Thomas Gary has moved to Miami, Florida, and is now Assistant Chief of Surgery at the Pratt General Hospital at Coral Gables. His home address is 1754 S.W. 24th Terrace, Miami.

Dr. C. Herbert Marshall, Jr., of Washington, was elected President of the National Medical Association at its annual convention in New York, August 20. Dr. Marshall is a graduate of Dartmouth College and of Howard University School of Medicine; he is a former President of the District Medico-Chirurgical Society and of the Washington Branch of the National Association for the Advancement of Colored People. During the War he served on the District Selective Service Appeals Board.

Dr. Murray M. Copeland, Professor of Oncology at Georgetown University School of Medicine, addressed a meeting of the Washington Civitan Club, September 7.

Dr. James A. Gannon appeared on the Ruth Crane hour over WMAL, September 6, at 11:30 a.m. He discussed "Sex Education in the Public Schools."

New participants from the Medical Society in the programs of Professional Staff Proceedings at Walter Reed Hospital are **Drs. John L. Parks, James Peter Murphy and Andrew A. Marchetti.**

MEMBERSHIP

The following applicants for membership were duly elected to membership at the meeting of the Executive Board, August 23, 1948, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

Active Members

Arcangelo R. T. D'Amore, 1917 Eye Street, N.W.
Hamilton P. Dorman, 4201 Fordham Road, N.W.

Associate

Francis Louis Zinzi, 2705 South 9th Street, Arlington, Va.

Recent changes in membership status:

Active to Associate

Bernard A. Fitzgerald

CORRESPONDENCE

WASHINGTON, D. C., August 26, 1948

EDITOR
MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA
1718 M STREET, N.W.
WASHINGTON, D. C.

DEAR SIR:

The newspapers of the District of Columbia have been helpful and coöperative with the Medical Society and have been of inestimable value in securing the sound public relations now enjoyed by the Society. The Committee on Public Relations is most anxious to continue the cordial feeling which exists.

May we state, for the benefit of the younger members, that it is not unethical for their names and direct quotations to appear in print in connection with accidents, operations or diseases which are newsworthy and which are under their care, providing the recommendations below are complied with (see 5-a, b and c). It is hoped that they will coöperate fully with the press if they are interviewed concerning their own patients. Inquiries by newspaper reporters, however, which pertain to medical matters other than these should be referred to the Committee on Public Relations.

The following recommendations were adopted by the Medical Society of the District of Columbia on March 6, 1940, and they are still in effect:

"GENERAL RECOMMENDATIONS GOVERNING MEMBERS OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA REGARDING PUBLICITY

"The Medical Society of the District of Columbia recognizes its obligation to provide the public with authentic health and medical information. It has, therefore, assigned to its Committee on Public Relations the task of furthering its health educational program. An important part of the Committee's duties relates to the preparation and release of newspaper articles. It is essential in this connection that the Committee have the coöperation of the Society membership.

"For the guidance of Society members the following recommendations governing publicity have been adopted:

1. The Committee on Public Relations is the agency through which the Society and its members should approach the public on all matters relating to medicine.

2. Members desirous of giving information to the press on a health or medical subject should notify the Secretary in order that the Committee on Public Relations may arrange and supervise its proper release.

3. Members invited by individuals or organizations to make a public address, a radio appearance, or to write articles on a health or medical subject for lay consumption should also notify the Secretary so that they may have the benefit of the Committee's suggestions. Society members are advised against broadcasting articles over the radio, or releasing them to lay publications, without the approval of the Committee. Adherence to this procedure will afford protection to both the public and the medical profession.

4. Any officer or chairman or member of a committee of the Medical Society of the District of Columbia who writes an article for the lay press, or delivers a speech over the radio, or in public, on a health and medical subject, should use only the title of his office in the Society and none of his personal titles. No member is authorized to publicly commit the Society to a policy unless specifically entrusted by the Society to do so.

5. To guide physicians who desire to write articles for lay consumption or to speak in public, the following suggestions are offered:

(a) Proper medical publicity is the issuance of a public statement concerning an event of general interest and importance. It stresses the happening rather than the individual.

(b) Undesirable medical publicity is the publication of material relating to individual activities designed to magnify the importance of that individual in the eyes of the public.

(c) Public health education is the impartial instruction of the public in facts relating to the nature, prevention, and treatment of disease. It stresses the facts rather than the individual presenting them."

Very truly,
JAMES A. GANNON, M.D.
Chairman, Public Relations Committee, The Medical Society of the District of Columbia

BOOK REVIEWS

Voluntary Medical Care Insurance in the United States. FRANZ GOLDMANN, M.D. Price, $3.00. Pp. 228. New York: Columbia Univ. Press, 1948.

Although the author of this book is in favor of compulsory sickness insurance, he has spared no pains in an effort to get at the facts about his subject. All in all he deals with his material objectively. Much of the data gathered will be especially helpful to individuals connected in any way with medical prepayment plans. They may not agree with Dr. Goldmann's conclusions, but will be grateful for the thoroughness of his investigation. Certainly this is a book which should be in the library of every medical plan executive.

T. W.

Neuroanatomy, 2nd ed. FRED A. METTLER, A.M., M.D., PH.D., Associate Professor of Anatomy, College of Physicians and Surgeons, Columbia University, New York. Price, $10.00. Pp. 536, with 357 illustrations, including 33 in color. St. Louis: Mosby, 1948.

In reviewing a textbook on neuroanatomy, particularly one that is now in its second edition, there should be less discussion of its subject matter (which is pretty standard in all comparable texts) and more of its method of presentation. It is gratifying to see so well portrayed in this edition the extension of a relatively new form of pictorial art, the third dimensional type. No doubt the neuroanatomist, Wendell Krieg, with his extraordinary artistic abilities has lent impetus to this trend.

Dr. Mettler is to be complimented upon his meticulous presentation of the gross anatomy of the neuraxis and the abundant illustrations which accompany his descriptions. These illustrations, for the most part, are not reworkings of the old standard projections as seen in all anatomy books, but are carefully executed, thoughtful portrayals of many anatomic structures and relations not usually pictured. One might wish, however, that the texts accompanying the figures were not so long and detailed for it is tedious to be constantly referring for one and sometimes two paragraphs from the text to the picture. A thorough study of the vascular supply of the central nervous system is included in this book with accompanying two-color plates. To the reviewer's knowledge this is the finest presentation of the general subject of the blood supply of the brain and cord in any one book to date.

In discussions of the microscopic anatomy of the brain, particularly of the brain stem, the author has very wisely placed side by side corresponding sections stained for myelin sheaths and cells. The cell stains more faithfully show the actual appearance of nuclear masses than any other method and do much to dispel the subconscious belief that the different cranial nuclei are either circles or elongated ovals on cross section.

The text itself is slow reading and it is possible that had there been a few more clinical correlations interspersed in appropriate places, its general aridness would have been to some extent relieved.

The section on cortical fiber projections, particularly from the frontal lobe, is more of an apologia for our lack of knowledge than a forthright presentation of what we do know. For instance, reference is made in the Preface to the work at Greystone Park in regard to topectomy, but the statement is made in the text, "Area 10 seems not to have any notable subcortical connections."

All in all this book is an excellent and to a limited extent encyclopedic reference book in neuroanatomy. For the student embarking on a study of the subject for the first time, I am afraid it is somewhat discouraging, but for one who has any more than a casual acquaintance with neuroanatomy, it is a valuable aid and can be highly recommended. This book makes an excellent foundation piece for the volume which Dr. Mettler coauthored with Merritt and Putnam called "Fundamentals of Clinical Neurology" and published by another company.

The format is attractive and frequent use is made of heavy-faced type and italics to emphasize important structures or their alternate names.

An excellent subject index is included in this book, as well as an author index and a list of selected references divided according to subject matter.

Jonathan M. Williams, M.D.

A Manual of Pharmacology and Its Applications to Therapeutics and Toxicology, 7th ed. Torald Sollmann, M.D., Professor Emeritus of Pharmacology and Materia Medica, School of Medicine, Western Reserve University, Cleveland. Price, $11.50. Pp. 1132. Philadelphia: Saunders, 1948.

This well known volume in pharmacology has been revised every four to six years since 1917 to the present seventh edition. Although entitled "A Manual of Pharmacology," in reality this book is more of reference nature in size and scope. According to the author, the aim of this book has been "to furnish a rather comprehensive outline of current knowledge and conception of drug actions, especially from the point of view of their practical importance in therapeutics and toxicology."

Well studied and standardized drugs such as cathartics, antiseptics, opiates, barbiturates, and drugs acting on the autonomic nervous system have been very fully covered. Considerable space is still devoted to less important agents such as local irritants, corrosives, astringents, demulcents, minor heavy metals, and other drugs not frequently used by the physician. The author states in the preface, "the revision of this book has aimed to strike a reasonable balance by subordinating what appears of questionable value, and eliminating what no longer has real importance or interest." Nevertheless, hydrastis occupies two full columns, although it has "few if any rational indications"; and an entire column is devoted to cotarnine, although its "employment was based on weak clinical and experimental data, which do not stand critical examinations."

Because of the difficulties in keeping up with the more recent advances in therapeutics when revising a book of this nature, the sections on antibiotics, antimalarials, antihistaminics, antithyroids and detergents are already obsolete. Digitoxin, which is currently one of the more widely used digitalis preparations, is still placed in fine print.

The book is well bound, clearly printed on light weight paper, and not as bulky as previous editions. The new double column format makes for greater readability. The bibliography is rather extensive with only an occasional omission of important publications. The book can be recommended for all medical libraries and as a reference book for physicians and pharmacologists.

A. Earl Vivino, M.D.

A History of the Heart and the Circulation. Frederick A. Willius, M.D., M.S. in Med., Senior Consultant in Cardiology, Mayo Clinic; Professor of Medicine, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, and Thomas J. Dry, M.A., M.B., Ch.B., M.S. in Med., Consultant, Section on Cardiology, Mayo Clinic; Associate Professor of Medicine, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota. Price, $8.00. Pp. 456, illustrated. Philadelphia: Saunders, 1948.

"A History of the Heart and the Circulation" is in reality three books in one, each of considerable value in its own right. The authors, faced with the problem of presenting a mass of interrelated data, the significance of which lies both in chronologic continuity and in subject matter, have chosen a rather unique approach.

The work is divided into three sections. The first, and major portion, is a chronologic presentation of the history of the circulatory system from 5000 B.C. to 1925 A.D. The second is a group of biographic sketches of some of the more important contributors to the knowledge of the cardiovascular system. This is followed by a tabular arrangement of data in chronologic order according to subjects.

In the first section, Drs. Willius and Dry have carried out the theme of their prefatory remarks, which is the importance of the cultural heritage of medicine. Not only are the Ebers Papyrus and the contributions of Galen recorded, but each era is introduced with a brief discussion of the then current state of culture and the prevailing scientific or philosophic attitudes. It is only in the light of the latter that one can fully appreciate, for example, the temerity of Servetus in publishing his account of the pulmonary circulation, which was at odds with the teachings of the great Galen. One of the most pleasing aspects of this portion of the book is the inclusion by the authors not merely of lasting contributions to the field but also of the many erroneous concepts, the blind acceptance of which frequently retarded the progress of medicine for so many years. There are passages in which the continuity of the text is disturbed by frequent, very brief, references to lesser personalities, but on the whole this section makes for interesting reading.

In the second section of the book, that containing the biographic sketches, there is of course a certain amount of repetition of material previously presented in chronologic form. However, this does not detract in the least from the biographies, which are designed, where possible, to convey more of an impression of the individual than of his scientific accomplishments. Many are of necessity brief, but all are well handled.

The last portion is probably of least interest to the average physician. Under such headings as "Aneurysm," "Diagnostic Signs and Procedures," and "Pathology of the Heart and Circulation" are arranged, in chronologic order, brief summaries of major contributions to the particular field. Such an arrangement is obviously of great value to one pursuing a particular line of research, or seeking background for a discussion or scientific paper, but it does not make particularly good reading.

"A History of the Heart and the Circulation" is to be highly recommended not only to those interested in the history of medicine but to anyone whose work touches the field of cardiology. It is both a readable history and a valuable reference book, particularly, from the latter standpoint, in view of the excellent bibliography. The volume is attractively designed, printed on good paper, and the numerous illustrations are for the most part quite well reproduced.

LT. COL. HENRY S. PARKER, M.C., U.S.A.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have been received for review:

Cancer Manual: Standards for the Diagnosis and Treatment of Cancer. Cancer Committee of the Iowa State Medical Society. Price, $1.00. Pp. 160. Iowa City, Ia.: Athens Press, 1948.

The Rehabilitation of the Patient: Social Casework in Medicine. CAROLINE H. ELLEDGE, Assistant Professor of Social Work, McGill University, Montreal, with a Foreword by PHILIP D. WILSON, M.D. Pp. 112. Philadelphia: Lippincott, 1948.

The Alcoholic Woman: Case Studies in the Psychodynamics of Alcoholism. BENJAMIN KARPMAN, M.D., Chief Psychotherapist, St. Elizabeths Hospital, Washington, D. C. Sponsored by Washington Institute of Medicine Research Foundation. Price, $3.75. Pp. 241. Washington, D. C.: Linacre Press, 1948.

A-B-C's of Sulfonamide and Antibiotic Therapy. PERRIN H. LONG, M.D., F.R.C.P., Professor of Preventive Medicine, The Johns Hopkins University School of Medicine; Physician, The Johns Hopkins Hospital. Price, $3.50. Pp. 231. Philadelphia: Saunders, 1948.

EDWARD LARKIN, M.D.

(1882–1948)

Dr. Edward Larkin, orthopedic surgeon, died on August 18, 1948, in Georgetown Hospital after a brief illness. Born on March 17, 1882, in Ithaca, New York, son of the late Edward and Mrs. Bridgett Prendergast Larkin, he received his early education in the schools of Ithaca and then attended Cornell University. He graduated from Georgetown University School of Medicine in 1908 and served his internship at Providence Hospital in Washington, D. C. He went abroad for postgraduate training in Austria and Germany.

In 1912 he entered private practice in the District of Columbia. During World War I he was a Captain in the Medical Corps of the U. S. Army. Following his separation from the Army he resumed private practice in Washington, specializing in orthopedic surgery. He was senior consultant in orthopedic surgery to Mt. Alto Veterans Hospital.

For many years he was connected with Georgetown University School of Medicine. At the time of his death he was Professor of Orthopedic Surgery. Always interested in the care of the crippled child, he was Chairman of the Medical Advisory Board of the District of Columbia Chapter of the National Foundation for Infantile Paralysis.

His interest in athletics extended over the years. The first freshman to play varsity football at Cornell, he was outstanding in football, baseball and track at Cornell University and Georgetown. He later coached football at Cornell and the Carlisle Indian School. It was because of his fleetness during his athletic days that he acquired the nickname "Bunny." The nickname stuck and he was known as "Bunny" by all of his close associates. He never lost interest in baseball, having been the team physician of the Washington Baseball Club for the past 36 years.

Dr. Larkin was an Active member of the Medical Society of the District of Columbia from 1914, a Fellow of the American Medical Association, and a member of the American Academy of Orthopedic Surgery, the Academy of International Medicine, AKA Fraternity, and the Metropolitan Club. For many years he was a very active member of the Friendly Sons of St. Patrick and served at one time as the President.

He was a most congenial host and friend, even of temper and considerate of others. Dr. Larkin's married life was a happy and contented one.

He is survived by a brother, Walter F. Larkin, of Teaneck, New Jersey, and four sisters, Mrs. Howard F. Walker of New York, Mrs. J. E. Reyna and Mrs. E. A. Hess, both of Ithaca, and Mrs. William Abbott of Southampton, Long Island. His wife, Mrs. Zola Bauman Larkin, died in 1944. There were no children.

William J. Tobin, M.D.

ROBERT JOSEPH CONLON, B.A., M.D.

(1893–1948)

Dr. Robert J. Conlon, former Chief of the Medical Staff of Providence Hospital, died August 22 at his home, 1901 Upshur Street, N.W. He had been in ill health for about two years.

Dr. Conlon was born in Scranton, Pennsylvania, May 25, 1893, and attended parochial schools there. After graduating in medicine from Georgetown University School of Medicine in 1918, he began as an intern his long association with Providence Hospital, which lasted until 1946. For more than 20 years he was Chief of the Medical Staff, and after his retirement he continued as a staff consultant. He was considered an authority on diphtheria and other contagious diseases. For many years he was Clinical Professor of Medicine at Georgetown.

Dr. Conlon had been engaged in the private practice of medicine in the District of Columbia since 1920. His office was at 1150 Connecticut Avenue, N.W.

He was a member of the District Medical Society from 1920 to 1922 and again from 1928 until his death. He was a Fellow of the American Medical Association and a member of the Georgetown Clinical Society.

Surviving are his wife, Mrs. Vincentia S. Conlon, and a daughter, Catherine Ann, who reside at home. His mother, Mrs. Catherine Conlon, three sisters, the Misses Jane and Alice Conlon and Mrs. Carl Schumacher, and a brother, William Conlon, reside in Scranton.

ROWLAND HOUGHTON FORD, M.D.

(1875–1948)

Dr. Rowland Houghton Ford, an Active member of the Medical Society of the District of Columbia, died August 23, 1948, at Doctors Hospital, following a brief illness.

Dr. Ford was a native of Washington, D. C., born July 20, 1875, the son of William T. and Mrs. Anne Leslie Ford. He was educated in District schools and was graduated in 1900 from Columbian College (now George Washington University) School of Medicine. Following his internship he began the practice of medicine in Queen Anne's County, Md.

During World War I Dr. Ford served in the Army Medical Corps with the rank of Captain. For a time following the War he was in charge of the genitourinary ward of Walter Reed General Hospital. In 1920 he was appointed Major in the Medical Department of the Officers' Reserve Corps. From 1920 to 1923 he was Passed Assistant Surgeon of the U. S. Public Health Service, stationed in Norfolk, Va.

For three years, 1923 to 1926, he was Assistant

District Health Officer. After reëntering private practice he continued for many years as a medical examiner in the District school system.

Dr. Ford was elected to membership in the District Medical Society in 1928. He was also a member of the American Medical Association and the George Washington University Medical Society.

His wife, Mrs. Osce D. Ford, survives together with a son, Robert Nelson Ford, both of whom reside at the family home at 5213 14th Street, N.W. A daughter, Mrs. Philip W. Dimon, lives in South Arlington, Virginia.

Electroencephalography—Morris

(*Continued from page 552*)

meningoceles and myelomeningoceles, arachnoiditis, Parkinsonism, and many others. In some of these cases, notably oxycephaly, when there is evidence of brain damage electrographically, which often is prior to the appearance of clinical signs or symptoms, operative intervention may be justified at this time. In some instances the appearance of the electroencephalographic tracing may influence the opinion as to the advisability of operation. For example, a hydrocephalic with a well developing alpha rhythm is a better candidate for operation than one who shows widespread large amplitude delta waves from all head regions.

A patient with neurologic complaints whose electroencephalogram shows a marked asymmetry with depression of activity over one hemisphere deserves a pneumoencephalogram on the basis that he may have a subdural hematoma, a porencephaly,[80] a cerebrovascular accident,[71] a cerebral aneurysm, or a concussion.[81]

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Extraperitoneal Cesarean Section—Ellis, Sheffery and Paquin

(Continued from page 554)

2. This procedure may be done on all potentially infected cases in which section is indicated, and may be done electively.

3. The operation is not technically difficult and can be performed by the average obstetrical surgeon familiar with the low cervical technic.

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Bilateral Sympathetic Dystrophy—Cooper

(Continued from page 556)

perature increase gradually disappeared over the following 36 hours. On December 23, 1947 a left lumbar sympathectomy was performed by the technic described by deTakats.[13] On January 5, 1948 a right lumbar sympathectomy was performed in the same manner.

Following each sympathectomy, performed under spinal anesthesia, the patient was subject to gastric dilatation which responded promptly to Wangensteen drainage. Since these operative procedures the patient has been free of pain. The skin temperature of each great toe is 36°C., and the dorsalis pedis and posterior tibial pulses are full and bounding bilaterally. The oscillometric readings have risen from ½ to 5 bilaterally. Since 5 days subsequent to the second operative procedure the patient has been able to bear weight and walk. The musculature of the lower extremities is more bulky and the muscle fasciculations have disappeared.

Summary

A case of bilateral posttraumatic reflex sym-

pathetic dystrophy with prompt response to lumbar sympathectomy has been reported.

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Wilms' Tumor—Burdick et al

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Midwesterners Live Longest—Observer

(*Continued from page 576*)

25.37 years in New England, and only 24.74 years in the Middle Atlantic states. As to the white women, the corresponding figures were 30.23, 28.32, and 27.56 years.

Infant mortality is lowest on the Pacific Coast, the rates in 1940–41 being 42.08 per 1,000 live births among white males, and 32.85 for white females. Again the Mountain Area had the poorest record, the figure being approximately 50 per cent higher.

Additional figures presented in the *Bulletin's* report merely confirm the conclusion arrived at in the beginning, that the Midwest is the place of choice if one wishes to live to a ripe old age.

T. W.

Washington Physicians of Yesterday—Burnett

(*Continued from page 581*)

He became a member of the District Medical Association in 1877, and of the Medical Society in 1879; of the latter organization he was Vice President in 1888, and President in 1890, and rendered minor committee service. He was also a member of the Washington Academy of Sciences, the Philosophical and Anthropological Societies, and the Columbia Historical Society. He was a member of the Cosmos Club 1879–1906, and its President in 1896; and he was memorialized in "Who's Who in America" and the "Dictionary of American Biography."

Dr. Burnett attained great distinction as a connoisseur, authority, and extensive writer on Japanese art, and was said to have been the first to introduce that subject into the United States. After his death his collection of antique Japanese art objects and curios, one of the finest of its kind in the world, was disposed of at public sale. He had broad interests; was frequently commended for his humanitarian activities; and he had one of the largest private medical libraries in Washington.

It was natural that a cultured and scholarly gentleman like Dr. Burnett should make substantial contributions to medical and artistic literature. He was author of a manual on astigmatism published in 1887, 245 pages, and of one on refraction, 1904, 67 pages. He published a translation of E. Landolt's manual of examination of the eyes, 1879, 312 pages. In addition to these he made more than 64 contributions to medical periodicals, besides literary and artistic writings.

On January 18, 1906, Dr. Burnett died from a sudden attack of pulmonary edema incident to chronic myocarditis. Highly eulogistic tributes were made to his memory by his biographers and by the Medical Society as an able practitioner, a successful teacher, a kind friend, a philanthropist, a polished scholar, a valuable contributor to medical and general literature, a patron of art, and a distinguished and interested member of the Society.

John B. Nichols, M.D.

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PLANS OF THE PUBLIC HEALTH SERVICE[*]

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THE plans of the Public Health Service—like those of any Federal agency—are sketched in broad outline by the people of the United States, through their representatives in Congress. Our task is to refine those plans and execute them with all the professional wisdom and skill at our command.

The Public Health Service is a technical agency, with broad authority to advance the Nation's health. Our policy is to exercise that responsibility by the processes of research, demonstration, practical aid, and leadership. The laws under which we operate support that policy, which in essence is a policy of coöperation with other official agencies, voluntary health agencies, the hospitals, professional schools, and research centers of the Nation.

Professional, civic, and political leaders, who have worked with us through the years, have been generous in their praise of the Public Health Service, both for our technical proficiency and for our impartial administration of coöperative programs. Naturally, we are sensible of the responsibility which such public confidence imposes, and we seek to be worthy of the trust.

The current programs of the Public Health Service are following three major trends which were established prior to World War II and which have been extended during the postwar period. These are: first, the expansion of research in medical and related sciences; second, the rapid development of public health programs to accomplish specific purposes, such as tuberculosis control or the control of degenerative and other chronic diseases; and third, the expansion of Federal support for these activities, primarily through aid to state agencies, public and private nonprofit institutions, and individual professional men and women.

These three developments have brought about very remarkable expansions in the work of the Public Health Service. None is more significant than the growth of our scientific research programs. Our National Institute of Health was established in 1930. Its rapid growth has been manifested by the creation of five special institutes during the past ten years, so that this year it was retitled "The National Institutes of Health."

The pattern of Federal support for medical research was established in 1937 with the creation of the National Cancer Institute, first of the special institutes. The law authorized the Public Health Service to make grants-in-aid to non-Federal institutions and individual scientists for cancer research; it also provided fellowships for training in research and clinical practice. This authority was extended in 1944 to authorize research grants and fellowships in general medical and related sciences.

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[*] Read at the Nineteenth Annual Scientific Assembly of the Society, September 29, 1948.

Following this basic pattern, the National Mental Health Institute was established in 1946, and the Institute of Experimental Biology and Medicine, the National Heart Institute, and the Dental Research Institute were established in 1948. Soon the remaining activities in the National Institutes of Health will be grouped in a Microbiological Institute.

The development of the National Institutes of Health into one of the finest centers in the world for experimental and clinical research is now assured. The Congress has provided for the construction of a Clinical and Laboratory Research Center at Bethesda, Maryland. Ground has already been broken and in a few years we shall have a 500-bed hospital and laboratory facilities designed and equipped especially to house in one structure both fundamental and clinical research in cancer, heart disease, mental and nervous diseases, and other important causes of disability and death.

The National Heart Act was passed and approved last June. The central provision of the Act is the establishment of the National Heart Institute as one of the National Institutes of Health, on the same administrative level as the National Cancer Institute. The six-point program authorized for the new Institute includes:

1. Conduct of research in cardiovascular diseases

2. Grants to public and private nonprofit institutions for research in these fields

3. Grants for the construction of facilities for research and training

4. Research fellowships for qualified applicants in the Institute or in outside institutions

5. Traineeships for clinicians in the diagnosis and treatment of cardiovascular diseases

6. The operation of an information center on research in cardiovascular diseases.

Like other research programs of the Public Health Service, the National Heart Institute is administered with the advice of an official advisory council, composed of national leaders in research, clinical practice, education, and public affairs. Governmental agencies are represented on the Council by ex-officio members, namely, The Surgeons General of the Public Health Service, the Army and the Navy, and the Chief Medical Officer of the Veterans Administration, or their representatives.

The National Advisory Heart Council held its first meeting, September the eighth. Because funds have not been appropriated for the new Institute, the Council was concerned chiefly with consideration of broad policies which will guide the development of a positive program at a later date.

The Public Health Service and the National Advisory Heart Council are in full accord that future activities in this field shall be completely coöperative between the governmental and nongovernmental institutions and services. The Council recommended that the National Heart Institute begin as soon as possible to explore and determine the needs for support of research in the field of cardiovascular diseases. They also endorsed substantial increases in fellowships for cardiovascular research, which are now available through the general medical research program of the National Institutes of Health.

The new National Dental Research Institute makes possible the expansion of intensive, fundamental studies in that long-neglected field. The Institute is authorized to conduct on its own, basic and applied research in the dental field. But of even more interest and importance is the authorization to make funds available to public and private institutions for dental research and training.

We shall also be able to award traineeships to dental clinicians for postgraduate study in the diagnosis, prevention, and treatment of dental disease. The Act makes possible financial aid to dental schools for the expansion of their teaching programs. Aid to the individual school of necessity will be on a small scale, because of the law which sets a limit of $750,000 on the total appropriation for the Dental Research Institute. However, the stimulus of the new program should result in a greater accessibility and a higher quality of training than are now generally available. The shortages of research personnel and specialized clinicians should be partially met.

The Dental Research Institute also will operate with the advice of an Advisory Council, similar in size and representation to that of the National Advisory Heart Council.

In prescribing broad professional and civic representation on these advisory bodies, Congress clearly intends that study of the Nation's health problems in these fields shall be closely related to the expressed needs of the people. The Public Health Service expects to make full use of the advice of the experts and public representatives who consent to serve on our Councils and who devote a good deal of time from their busy lives to our problems.

Although the National Institutes of Health are the major research branches of the Service, many of our public health programs include research, both fundamental and applied. Our Communicable Disease Center at Atlanta, Georgia conducts investigations and demonstrations in the control of malaria, typhus fever, dysentery, encephalitis, poliomyelitis, and other neurotropic infections. The Center is an outgrowth of the successful malaria control operations initiated during World War II. The development and application of new technics for the use of DDT in the control of insect-borne diseases have been its most significant contributions.

Other field and laboratory studies in venereal disease, tuberculosis, and dental disease have produced outstanding results, such as the intensive treatment of syphilis and gonorrhea with penicillin, small film photofluorography for tuberculosis case-finding, and the application of sodium fluoride to children's teeth for the prevention of caries.

Encouraged by the findings on sodium fluoride, Congress this year appropriated $1,000,000 to be used in establishing a topical fluoride demonstration unit in each state. Thirty-two states have already requested demonstrations.

The purpose of the program is to demonstrate the technic to dentists and dental hygienists in private practice and in state and local health agencies, and to encourage the establishment of continuing community programs. Each of these demonstration units will be staffed by a dentist, two dental hygienists, and a clerk. The units will be mobile and the equipment portable. Plans for the demonstrations were worked out at a conference of state and territorial dental health directors with the Public Health Service and the Children's Bureau in June of this year. Actual work will begin in the very near future.

In coöperation with the medical professions, hospitals, and official health agencies, we are also conducting small-scale demonstrations of case-finding technics for the detection of heart disease, diabetes, and nutritional deficiencies in apparently healthy populations. If these technics continue to produce good results, we hope to see them applied on a wide scale with a view to uncovering various conditions in early stages when therapy is most effective.

The fellowship program of the Service for the training of scientific investigators is of equal importance with our own studies and our support of investigations in outside institutions. At the present time there are 275 scientists in training in 66 institutions through National Institutes of Health fellowships. They are engaged in fundamental and clinical research on a wide variety of problems, including cancer and psychiatry. Research fellowships are awarded to qualified applicants with a master's or a doctor's degree who have been accepted by an approved institution.

The second trend which I mentioned in the beginning is the rapid development of special public health programs. In the past decade the Congress has established in the Public Health Service a number of national programs to combat specific conditions. These activities are based on the principle of Federal financial and consultant assistance to the states for administration and technical operation of health services. Beginning in 1935, under the provisions of the Social Security Act for general public health services, many of our state health departments initiated special control programs not supported by specific Federal grants. The first of the so-called categorical programs established Federally began in 1938, with the passage of the National Venereal Disease Control Act. During World War II, in 1944, a national tuberculosis control program was established. In 1946, the National Mental Health Act added grants-in-aid to the states for community mental health services. In 1947 special funds for cancer control were made available in the National Cancer Institute, thus earmarking grants to the states for this purpose. The National Heart Act of 1948 makes similar provisions for the control of cardiovascular diseases. The Hospital Construction Program, initiated in 1946, provides an opportunity to increase local facilities for the prevention and treatment of disease.

The recent emphasis on cancer, cardiovascular diseases, and mental health are logical developments in public health. The population of the United States is older. Life expectancy at birth increased by 16 years between 1900 and 1940. By 1975, 34 per cent of the population will be over 45 years old, whereas in 1900 the same age group accounted for only 18 per cent. A continuous rise in death rates from cancer, cardiovascular diseases, and chronic degenerative diseases associated with middle and later life has accompanied the aging of the population. Also, for the past 15 years there has been an increasing volume of mental disease and psychic maladjustment.

As yet we have done very little to deal with the major problems of adults or to change these mortality trends. All of the new medical knowledge and skills have added only $2\frac{1}{2}$ years to the life expectancy of the 40-year-olds. The major steps in public health during the next few years must be toward the prevention and control of degenerative and other chronic diseases, including mental disease.

The development of special programs must be accompanied by the development of comprehensive local health services. To counteract the potential danger of overspecialization, the public health administrator must put together the separate parts. To do this, every community needs a well-staffed, full-time local health unit. At present less than 5 per cent of the population has health departments fully staffed according to our minimum standards, although about 75 per cent has some form of health service. Without adequate staffs and facilities all the programs suffer, including the basic programs of communicable disease control, sanitation, maternal and child health, and the new special programs for the control of long-term illnesses.

We hope that in the next 12 months there will be a positive and successful drive to provide local health services throughout the Nation. The American Medical Association has included such a proposal in its ten-point National Health Program, and the American Public Health Association has devoted many years to the study and promotion of plans for Nation-wide local health service. Many other professional and civic groups have endorsed the plan. Within the next year we should have more Federal support for the expansion of local health services, at least up to the full amount authorized by Congress in 1944.

Total appropriations to the Public Health Service have increased by about 2,000 per cent between 1932 and 1949. Most of this increase is in funds for assistance to state agencies, to institutions, professional schools, and individual scientists. In 1939 the grants-in-aid to the states totaled about $10,000,000; in 1949 our total assistance to state agencies, including hospital construction, will exceed $75,000,000. In 1939 research grants and fellowships were confined to the National Cancer Institute and totaled about $200,000. In 1949 we shall grant approximately $30,000,000 for research and training. Needless to say, we hope that this trend will continue, and that our assistance to other organizations always will exceed the public health work which we do directly.

Perhaps the most urgent problem and the most difficult to solve is the shortage of professional personnel in all fields of research, medicine, and public health administration. More adequate financial support to professional schools is needed, so that they may be able to hold their own against the increased costs of professional education. Without increased support the schools will not be able to increase the supply of personnel, nor to maintain the quality of training.

Increased support from private sources is essential. The recent establishment of a new graduate School of Public Health in the University of Pittsburgh, with Dr. Parran, my distinguished predecessor, as Dean, is evidence that private support of professional education is not exhausted. Nevertheless, the total problem of medical education is so vast that we should not expect it to be solved with less than active support from all sources, Federal, state and municipal governments, no less than private philanthropy and public subscription.

Although the Public Health Service has no program of general assistance to professional education, we have been able to make substantial grants to medical and dental schools to increase and improve their training in cancer. Grants for graduate and postgraduate training in psychiatry also are being made available to medical schools. Under the new programs for heart disease and dental research, we should be able to give additional assistance to professional education in these fields. As in other programs of financial aid, the Public Health Service will preserve its policy of allowing the institutions to administer their programs without direction or control by the Federal agency.

We expect that our activities in international health work will increase during the coming years. The membership of the United States in the World Health Organization expands our opportunity to promote public health as a primary factor in the maintenance of peace.

The World Health Organization plans to maintain only a small central staff at the Secretariat and to appoint expert advisory committees on its various projects. It is to be expected that experts from the official and nonofficial agencies of all nations will be called to serve on these committees, and to contribute their knowledge and skill to world health. It is also likely that many governments will ask for demonstrations on such problems as malaria control, maternal and child health, tuberculosis and venereal diseases. In these and other fields, public health and medicine in the United States have much to offer. Our official and private organizations alike should expect to participate in WHO's programs.

The Public Health Service also is supplying personnel for health missions now active in the Philippine Islands, Liberia, and Greece. We have been active in our support of the Pan American Sanitary Bureau for many years, both in assigning officers to extended details at the Bureau's headquarters and to special studies and demonstrations in Latin American countries.

Finally, several developments in recent months have renewed interest in problems which we have hitherto associated only with war. The peacetime draft for the armed forces will require intensified public health work in extra-cantonment areas. The Secretary of National Defense has requested the Public Health Service to assume its wartime responsibility in this field, and we are working with our colleagues in the armed services and in the states to develop the essential programs. The establishment of the National

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THE PREMATURE INFANT

Review of 169 Cases over a Five-year Period at Children's Hospital

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THE more intimate knowledge of the premature infant obtained during the past 15 years has made for many great gains in technics and management. By careful review and analysis information can be gained from the cases handled over a period of years in one institution, and it is the purpose of this paper to review statistically and to discuss the management of the premature infant admissions at this hospital during the 5-year period from January 1943 until December 1947.

Definition

The premature infant has been uniformly described by the American Academy of Pediatrics as one who weighs 2,500 grams (5½ pounds) or less at birth regardless of the period of gestation. These infants may not be capable of independent extra-uterine life because of lack of full development, constitutional, maternal or local factors.

Case Material

The patients admitted to the hospital were drawn from both private and clinic cases. Whereas most premature units have their admissions from obstetric units and outside sources, which would tend to weigh their data, our clinic admissions include cases in which delivery was aided by nonmedical persons or medical students, and cases of unexpected precipitous births. There is no direct relationship between this hospital and an obstetric unit, and infants are received in all states of health and circumstances.

TABLE 1

Mortality Statistics

	1943	1944	1945	1946	1947	TOTALS
Total no. patients	30	24	27	40	48	169
Deaths	18 (60%)	10 (42%)	14 (51%)	20 (50%)	12 (25%)	74 (43.7%)
Deaths in 24 hours	8 (26%)	2 (8%)	1 (2%)	6 (15%)	6 (12.5%)	23 (13.6%)
Deaths after 24 hours	10 (34%)	8 (34%)	13 (49%)	14 (35%)	6 (12.5%)	51 (30.1%)
Discharged well	12 (40%)	14 (38%)	13 (49%)	20 (50%)	36 (75%)	95 (56.3%)

During the 5-year period selected there were 169 premature infants who filled the criterion of the above definition admitted to the premature nursery of this hospital (table 1). Sixty-seven were colored and 102 white. There were 94 females and 75 males. Table 2 correlates the cases according to year. With the exception of 1943, there has been an increase in the number of admissions. This probably can be attributed to the education of the community to the existence of the unit, which was firmly established in 1945. During the past 10 years the percentage of premature births has risen from 5 to almost 7.5, a fact which increases the importance of the premature infant management.

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TABLE 2

Incidence: Race and Sex (Dead)

	1943	1944	1945	1946	1947	TOTALS
Colored	6 (33.3%)	4 (40%)	8 (57%)	6 (30%)	4 (33.3%)	28 (37.8%)
White	12 (66.6%)	6 (60%)	6 (43%)	14 (70%)	8 (66.6%)	46 (62.2%)
Male	5 (27.7%)	5 (50%)	3 (21%)	12 (60%)	6 (50%)	31 (41.8%)
Female	13 (72.3%)	5 (50%)	11 (79%)	8 (40%)	6 (50%)	43 (49.2%)
Total	18	10	14	20	12	74

Ninety-five patients or 56 per cent were discharged as well. Of the 74 patients or 43 per cent who died, 23 patients or 31 per cent died within 24 hours. The over-all corrected mortality for the 5-year period is 30 per cent. Table 1 more clearly tabulates the mortality each year. From the figures it is apparent that the mortality has been lowered gradually during the past 3 years to 12.5 per cent for 1947. This may be attributed to the rigidly controlled and operated nursery where limitation of only essential personnel is the order and to the use of the chemotherapeutic and antibiotic agents.

FACTORS ASSOCIATED WITH PREMATURITY

Due to the nature of our hospital admissions and the lack of correlation between the obstetric and the pediatric histories, the factors associated with prematurity could not be discerned in 78 per cent of the cases. The persons associated with the infant rarely have the necessary information for a history, and as yet it has been impossible to organize the necessary follow-up system due to lack of personnel and finances. Often even with a history it is impossible to find a satisfactory reason for prematurity. The main factors for prematurity may be classified as:

A. Obstetric, to include parity, multiple births, premature separation, placenta previa

B. Maternal factors, to include history of previous prematurity, toxemia, habitual abortion, congenital syphilis, acute and chronic diseases

C. Congenital malformations

D. Trauma, blows and falls.

In the 22 per cent of cases in which an adequate history was available, the obstetric factors predominated to cause prematurity (table 3). Various authors have listed parity as a factor in prematurity.[1, 2, 3] In this series, premature infants were born to 45 primiparas. There were 22 multiple births in the 169 cases. No definite history of an acute infection or trauma was obtained, although several instances of the latter were investigated.

TABLE 3

Factors Associated with Prematurity

	CASES
I. Unknown factors (78%)	132
II. Known factors (22%)	37
A. Obstetric	
1. Parity	
a. Multipara	81
b. Primipara	45
2. Multiple births	22
3. Premature separation	5
4. Placenta previa	2
B. Maternal factors	
1. History of prematurity	6
2. Habitual abortion	2
3. Congenital syphilis	2
4. Toxemia	6
III. Congenital malformations	2

MORTALITY

Figures for 1946 from the National Office of Vital Statistics still lists prematurity as one of the five leading causes of death in infancy. Although the data presented in this paper are small, the mortality figures of this institution compare favorably with those of others having larger series of patients.[3, 4, 5, 6] It is felt that there are certain factors that add to the mortality here that a future program will help to eliminate: (1) home delivery (of which there were 24 out of 169 cases), (2) lack of prenatal care among a portion of the population, (3) the long period between birth and hospitalization, and (4) the lack of proper handling of the infant and transportation to the hospital after birth.

In 54 of the 73 fatal cases, or 73 per cent, autopsies were performed. The major causes of premature death were prominent in our cases (table 4). Prematurity contributed to the cause of death in most cases. Infection caused 73 per cent of the deaths. Evidence of infection often escapes diagnosis in the premature infant, and constant medical supervision is needed to combat this major factor in mortality. Atelectasis is the second most common major cause of death in our series. The majority of the cases had multiple conditions that contributed to the cause of death, which is to be expected.

TABLE 4

Autopsy Findings in Premature Infant Deaths 1943–1947

	CASES	PER CENT
1. Infection		
Bronchopneumonia	54	73
Diarrhea of newborn	14	
Acute ulcerative enterocolitis	25	
Respiratory infection other than bronchopneumonia	10	
Omphalitis	3	
Abscess	1	
2. Atelectasis	40	54
3. Dehydration and malnutrition	16	21
4. Intracranial hemorrhage	6	4
5. Aspiration	4	2
6. Hemorrhagic disease	4	2
Erythroblastosis	2	
Thrombosis of ductus arteriosus	2	
7. Miscellaneous	7	9
Intestinal obstruction	3	
Burns, first degree	1	
Pancreatic fibrosis	1	
Brain cyst	1	
Syphilis	1	

The greater number of deaths among premature infants occurs within 24 hours and in infants weighing less than 1,500 grams.[7] The higher mortality at this time is explained on the basis of severe immaturity, maldevelopment, or birth trauma. Table 5 correlates the weights of infants in this series and demonstrates that the higher mortality is in the lower weight groups almost without exception. The exception to this rule is in the case of multiple births, in which often a smaller infant may have a better prognosis. Despite the strong influence of the above vital statistics, the responsibilities of the obstetrician and pediatrician are great.[8, 9] Adequate control of the prenatal period and its difficulties, and the immediate care of the infant, with proper handling and immediate supervised care, are necessary.

TABLE 5

Correlation between Weight and Mortality

	TOTAL	LIVING	DEAD	DIED WITHIN 24 HOURS
grams				
Under 1000	10	1	9	7
1000–1500	39	14	25	12
1500–2000	71	42	29	3
2000–2500	49	38	11	1
Total	169	95	74	23

There has been a trend for the mortality statistics to improve throughout the country, and the statistics presented here follow those lines. When the community finally becomes aware of the existence of an adequate premature unit other than those associated with a maternity institution, the survival rate will increase. An infant ambulance service, as described by Hess,[4, 10] if eventually available in the District of Columbia, will further improve the survival rate of prematures as well as aid their subsequent development.

TREATMENT

Premature units should be segregated from other parts of the hospital with personnel whose activities and duties are restricted to the unit. All prematures admitted to this hospital are immediately placed in oxygen beds with the temperature and humidity controlled. The Armstrong incubator bed and the Kreiselman resuscitation apparatus are used. The latter is a heated bed with a unit allowing for aspiration of air passages and with a method of administering oxygen under pressure. The infants receive nothing by mouth for at least 24 hours after birth, then if no contraindications exist, sterile water is given in increasing amounts depending on the patient's condition. Specific formulae were left to the judgment of the attending physician. Artificial formulae, including powdered milks, are used and only in a few isolated cases has breast milk been utilized. The most commonly used formula has been evaporated milk and carbohydrate mixture with or without lactic acid added. Gordon et al[11, 12] have shown the efficacy of simple mixtures of evaporated cow's milk or mixtures of partially skimmed cow's milk under ideal hospital conditions. Powdered half-skimmed milk diluted with water and with added carbohydrate has been used successfully in New Haven and New York.[12] The statistics for weight gain and survival on the different formulae do not differ to any great extent, particularly in the larger infants.

Feeding is accomplished by the most suitable method for the child. If development and sucking ability are far enough advanced, a bottle with a nipple is used; otherwise a rubber-tipped dropper or gavage is utilized, the latter in infants not taking enough by dropper. The gavage procedure is performed only by experienced trained nurses.

Parenteral fluids are used only when indicated, i.e., when a loss of 10 to 15 per cent of the birth weight has occurred and when weight cannot be maintained orally. Anemia also is treated only when clinical conditions warrant. Vitamins are started when the feedings are stabilized, and this has varied from 3 to 6 weeks. Complications are treated according to standard methods. One cannot underestimate the value of chemotherapy and the antibiotics.

LENGTH OF HOSPITAL STAY

The average hospital stay of 23 days compares with the statistics reported by Wallace et al.[13] Our average is for infants under 2,500 grams and includes the 169 patients. The factors previously mentioned, in regard to the poor condition of some infants on admission, add to the length of stay. The longest stay was 96 days in a patient whose stay was complicated by multiple skin abscesses with bacteremia, diarrhea and otitis media.

SUMMARY AND CONCLUSIONS

1. The management of the premature infant in a special unit is discussed with a statistical review of 169 patients admitted to Children's Hospital, Washington, D. C., during the 5-year period from January, 1943 through December, 1947.

2. Mortality for the 5-year period was 30.1 per cent with a noticeable improvement since establishment of a rigid premature unit in 1945. Corrected mortality for 1947 was 12.5 per cent, and although these figures are not large they compare favorably with others.

3. It is felt that rigid nursery control with qualified personnel is absolutely necessary along with standard methods of treatment.

4. A discussion of the premature infant with a review of methods of treatment and a brief review of the literature are included.

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DO'S AND DON'T'S IN THE DIAGNOSIS AND TREATMENT OF INFERTILITY IN THE MALE

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WHEN it is realized that sterile mating occurs in approximately 10 to 15 per cent of married couples, it is quite understandable that with the increase of marriages during the war years there has resulted a corresponding increase in the number of childless couples who seek medical advice.

Infertility in the male is the causative factor of approximately one third of the childless marriages. Therefore, it is evident that a clinical history and complete physical examination of the husband is of primary importance. Particular emphasis is placed on a careful search for any disease or abnormalities of the reproductive organs. Each patient should receive a thorough diagnostic investigation before a final diagnosis is given and any treatment is initiated.

An accurate diagnosis is highly essential, but, unfortunately, in spite of the most careful examination, the causation of the impaired fertility in the majority of cases cannot be found. Although a diagnosis is quite simple, the same cannot be said of treatment, and the results are not regarded as being very encouraging. The outstanding fact is that in some cases the cause is a hopeless lesion which will not respond to any type of treatment. On the other hand, a certain number of borderline patients with subfertility are improved and their wives become pregnant.

A careful evaluation of the semen and particularly a study of the spermatozoa are of prime importance. Instructions should be given as to the proper technic in the collection of the semen in order to avoid the many errors that may result from failure on the part of the patient to exercise proper care. The ideal method is to have the patient masturbate directly into a clean, carefully dried, wide-mouthed container. The patient should be instructed to abstain from intercourse prior to obtaining the specimen for a period of at least 3 days and should be cautioned to take no drug during the week preceding the test. In the collection of the specimen, it should be emphasized that the first portion of the ejaculate should not be lost since it has been shown that this portion contains about 75 per cent of all the spermatozoa and its loss would definitely affect the true findings. Some patients are unable to produce a specimen by masturbation in the physician's office but can quite readily obtain one in his own home by this method.

Normal coitus and withdrawal with ejaculation into a wide-mouthed bottle is the next best means of obtaining a specimen. Should the specimen be obtained at the patient's home, delivery should be made to the physician's office as soon as possible after ejaculation with a notation as to the time of collection. It is not necessary to give instructions to keep the specimen at body temperature, because these precautions often lead to overheating of the semen.

It is now generally agreed that the condom should not be used in the collection of semen because chemicals used in the manufacture of condoms are hostile to spermatozoa and will lead to many false reports.

Specimens obtained in the physician's office should be given ample time for mucolysis to take place before they are placed on the slide for microscopic examination. Unless this precaution is taken, a false picture of the motility of the spermatozoa will result.

In spite of the recent advances of the scientific appraisal of semen, it is most amazing that there are still physicians who, on the finding of even a few spermatozoa under the microscope, exclude the male as the causative factor of a sterile mating. It is likewise unbelievable but true that some physicians examine the prostatic secretion as a means of testing for spermatozoal efficiency.

Complete absence of spermatozoa is conclusive evidence of absolute sterility. However, in patients with only relatively impaired semen, the chances of fertilization are so greatly reduced they may be rated as clinically sterile.

With a view of avoiding any repercussions or suspicions, one should be most careful in making any definite statement as to the permanence of a diagnosis of sterility. Just as there have been cases in which men who were formerly fertile become infertile without any known illness or cause, so it is quite possible for the infertile individual to regain some or all of his fertility.

Deficiency in the number of spermatozoa generally indicates lowered fertility, but there is no definite line of demarcation which distinguishes the point where sterility commences. Infertility is most likely to be found in males whose average count shows any considerable reduction below 60,000,000 spermatozoa per cubic centimeter. Although this level is a reasonable dividing line between good and impaired fertility, there are on record exceptions in which impregnation has occurred in which the cell count has been less than this figure. Counts below the 60,000,000 level indicate relative infertility but not actual sterility, and, although there is a possibility of impregnation, the probability is remote. As is well known, the proper evaluation of a seminal fluid must include the comparative morphology of the spermatozoa, their motility, and their endurance. Twenty per cent abnormal cell count is generally accepted as the upper level for relative fertility. In so far as motility is concerned, any increase of above 30 per cent of immotile spermatozoa should be considered abnormal.

Specimens of high fertility should show prolonged motility at room temperature, and even at the end of 24 hours in its own medium there still should be seen a high percentage of motile spermatozoa. Sperm that have a high endurance rate can be expected to be more resistant to external stimuli and thus increase the possibility of ultimately fertilizing the ovum.

Before any final diagnosis of spermatic deficiency is made, at least 2 or 3 seminal fluid examinations should be made with rest periods of at least 1 week between examinations.

Extraordinary laboratory tests are unnecessary in the ordinary examination for infertility. The routine tests should include:

1. Urinalysis
2. Microscopic examination of the prostatic secretion
3. Detailed semen analysis
4. Serological examination for syphilis
5. Basal metabolic rate
6. Complete blood count and hemoglobin.

Testicular biopsy has proved to be a reliable method in accounting for faulty spermatogenesis and the absence of spermatozoa in the semen. It offers a definite means of deciding whether cases of sterility are due to complete block with possible operative salvage. Although it is a minor procedure and entails little discomfort to the patient, it is felt that it should not be a routine procedure in the diagnosis of all cases of lowered fertility. With future improvement in therapy, testicular biopsy will offer a definite means of avoiding errors in treatment.

In the examination of ex-servicemen who present themselves for fertility problems, the possible existence of febrile states, particularly uncured malaria, should be kept in mind as a possible cause of pathologic changes in the testes with resultant poor spermatogenesis.

Fertility in the female is only possible in the limited period of each month during which ovulation takes place. Simple instruction as to the optimum period for fertility has quite often resulted in pregnancy. On questioning of patients, it is not unusual to learn that coitus is practiced to the exclusion of this time. Too frequent coitus may decrease the number and activity of the spermatozoa, and with this in mind the patient should be advised to abstain from intercourse several days prior to the ovulation period so that the maximum number of spermatozoa will be available at the optimum time.

At the present time, it can be definitely stated that there is no hormone which can be regarded as a reliable specific for spermatic deficiency. Although there is no known effective hormonal therapy and in most cases the results are disappointing, definite improvements are seen following its use and pregnancies do result in some cases. In the successful cases that one encounters, it is problematic as to whether the successes can be attributed to the use of the hormone or to the other steps in the therapy that are used in conjunction with it.

Experience has proved that the use of testosterone is contraindicated in cases of lowered fertility, because rather than increasing spermatogenesis it actually causes a definite depression, especially in larger doses.

There is an abundance of clinical reports indicating that thyroid deficiency may produce seminal inadequacy and that the administration of thyroid will quite often result in improved seminal fluid findings and impregnation. Even patients whose metabolic rates are within normal limits should be placed on thyroid therapy. Desiccated thyroid is considered the most useful single glandular preparation in the treatment of sterility, and it is believed that its action for the improvement of thyrogonadal relation appears to be enhanced by the simultaneous administration of vitamin B complex.

In so far as vitamin therapy is concerned it is common knowledge in the animal industry that carefully balanced diets of minerals, proteins and vitamins are necessary to ensure optimal fertility. In humans, from year to year, it appears that there is an ever-changing fad as to which vitamin is the most beneficial. At the present time the use of vitamin B complex is the prevailing vogue.

Constitutional therapy has a definite place in the treatment of infertility, and in those patients complaining of weakness, fatigue, overwork and nervous exhaustion the proper amount of rest, a vacation, and a full, nourishing diet should be prescribed.

Operative intervention in the form of epididymovasostomy or some similar operation is indicated in those cases in which the testes are functioning normally but the vas or epididymis is occluded. Successful results following epididymovasostomy can be expected in about 20 per cent of those operated on, and the operation is indicated in those patients who are willing to take these odds.

During the past year hyaluronidase was recommended as an aid to the fertilization of the ovum by subfertile seminal fluids. This enzyme is capable of dispersing the follicle cells which surround recently ovulated ova and theoretically it was concluded that through its use fertilization of the ovum would be readily accomplished. Unfortunately, however, the reports of its use have been quite disappointing but further investigation and research along these lines may eventually prove that this product will be of value.

In spite of the frequent discouragement encountered in the treatment of male infertility, it should be emphasized that even with the limited knowledge of therapy available pregnancies do result in a sizable number of instances. The everlasting gratitude of those patients successfully treated should urge us on to further efforts.

Considerable investigation remains to be done on many aspects of the unsolved problems in the treatment of male infertility, but it should be expected that eventually, with continued clinical and laboratory research, more effective types of therapy will result.

MENINGO-ENCEPHALITIS COMPLICATING THORACIC HERPES ZOSTER

Report of a Case with Recovery

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THE case presented is that of a 56-year-old white female who developed signs and symptoms typical of encephalitis some 7 days after the appearance of herpes zoster over the lower right thorax. In view of the manner in which these two conditions developed in this patient, and by comparing this case with others reported in the literature, it is felt that the encephalitis is directly related to herpes zoster as an etiologic agent.

Madonick[1] states that several investigators have given as an explanation of the encephalitis following the exanthems the theory of the activation of a latent virus by the exanthem. Experimental studies on the activation of one virus by another are few, but Levaditi and Nicolau[2] observed in the rabbit that rabies produced by the injection of the virus of rabies can cause death from neurovaccinia which had been latent. In later experiments they claimed that the herpes virus when placed on the nasal mucosa of a rabbit is stimulated by the simultaneous inoculation of vaccine on the skin to produce a fatal herpetic encephalitis. In the explanation of recurrent fever blisters Rivers[3] wrote that persons with this condition usually possess an abundance of antibodies against the active agent in their serums. The paradox has been explained on the basis of the persistence of the virus in the cells of immune individuals who develop crops of blisters whenever subjected to the conditions that are encountered as a result of typhoid vaccinations, common colds, exposure to high temperatures for several hours, etc. In other words, the common cold which is a virus infection may activate the virus of herpes febrilis.

Krumholtz and Luhan[4] report a case of fatal encephalitis complicating herpes zoster of the lower face, neck and upper shoulder and chest on the right side. Postmortem examination of the brain revealed the presence of a relatively mild nonpurulent encephalitis of the medulla oblongata but failed to demonstrate an infiltrative type of inflammation in the brain above the medulla. The histologic changes in the cerebral cortex were similar to those seen in many instances of toxic psychosis or toxic encephalopathy, i.e., edematous changes which did not seem to reflect the violence of the clinical picture. These authors argue that the inflammatory reaction within the medulla oblongata was indicative of the presence therein of the virus of herpes zoster (after its intraneural dissemination rostrad from the ganglionitis of the upper cervical ganglia and the posterior poliomyelitis). They concluded, furthermore, that in this apparently allergic patient the toxin of the virus of herpes zoster was the etiologic factor in the toxic psychosis or toxic encephalopathy.

Cases of encephalitis of presumed herpes zoster etiology with histopathologic studies of the brain are rare. Thalhimer's case[5] was that of a woman aged 72 who became weak and drowsy 6 weeks after onset of zoster over the right side of the neck and died a week later. Histologic changes of prominent perivascular areas of infiltration occurred in the medulla and pons and in the basal ganglia but none in the cortex.

Biggart and Fisher[6] presented the case of a man 63 years of age who had an attack of herpes zoster involving the right buttock and thigh. The patient was drowsy and delirious on admission to the hospital and died on the fifth day. Here again the changes occurred in the brain stem and basal ganglia with little found in the cortex.

Bellavitis[7] reported the case of a psychotic patient aged 53, a former alcoholic, in whom cutaneous herpes zoster had suddenly developed in the distribution of the second to the fourth cervical segments on the left side. Eight days later peripheral palsy of the face, and several days later hemiparesis, developed on the left side. Again the findings at necropsy involved chiefly the cervical cord and the brain stem.

Other reported cases are similar. The usual level of the herpes zoster dermatitis was cervical in the reported cases, except that of Biggart and Fisher,[6] in which it was sacral. The interval between the onset of herpes zoster and the clinical appearance of encephalitis ranged from 1 to 6 weeks. Symptoms of encephalitis varied from generalized manifestations of drowsiness, delirium, or irrationality, and focal signs of facial palsy.

Krumholtz and Luhan[4] conclude that the amount of literature on encephalitis of presumed zosteric origin is meager but is sufficient to indicate that this complication may occur.

Alterations in the spinal fluid of patients with herpes zoster are found even in the absence of clinical signs of meningo-encephalitis. Lymphocytosis is the usual cellular response and is reported in many instances. Brown and Dujardin[8] reported lymphocytosis in 28 of 42 cases. Touraine[9] found pleocytosis in 50 per cent of 97 cases of localized herpes zoster collected from the literature.

It is believed, however, that the following case history will justify a diagnosis of meningo-encephalitis and not simply a pleocytosis of the spinal fluid reflecting a herpes zoster infection.

Report of Case

The patient, a 56-year-old obese white female, was apparently well prior to January 26, 1948, except for a past history of chronic cholecystitis with cholelithiasis for which she had been treated by medical régime only. On January 26 she began to experience pain similar, she thought in retrospect, to the pain associated with the gallbladder attacks. A tentative diagnosis of cholecystitis was made. Three days later a typical herpetiform lesion erupted over the lower right ribs extending anteriorly to the midline of the epigastrium and posteriorly to the spine. The diagnosis was obviously herpes zoster involving the lower right thoracic nerves. The patient was given some codeine tablets and calamine lotion, and her condition remained satisfactory until February 1. On this day she awoke feeling drowsy and listless, and several hours later she was found by her sister to be lying on a couch counting and mumbling to herself and failing to respond to questioning. She was immediately hospitalized and a spinal puncture performed. I saw the patient in consultation and made a tentative diagnosis of encephalitis, probably related directly to the herpes zoster infection. Highlights of the examination at this stage were as follows: The patient was a very obese white woman, lying in bed, moving away from all tactile stimuli, moaning occasionally in unintelligible monosyllables, unable to obey any requests, obviously critically ill, incontinent of urine and completely oblivious of her surroundings. Her temperature was 99.4 F., the respiratory rate 24, the pulse rate 82, and the blood pressure 160/100. The pupils were equal and reacted normally. Funduscopic examination was difficult because of restlessness, but the optic disc of the right eye was sharp and distinct. There was no gross pathology of retinal fields. Definite stiffness of neck was present with facial grimacing on flexion of the chin on the chest. The lungs were clear, and the heart was essentially negative. On the abdomen a herpetiform rash was seen to extend over the lower ribs from near the mid-epigastrium to the postaxillary line. There was a healed midline scar from the umbilicus to the symphysis pubis. The extremities were negative. The cranial nerves were normal as far as they could be tested. The tendon reflexes were equal bilaterally but were more active in upper extremities. The abdominal reflexes were intact. Brudzinski and Kernig tests elicited an apparent severe pain reaction. The Babinski test was negative bilaterally.

The spinal fluid on admission was clear in all tubes, under an initial pressure of 180 mm. water and a final pressure of 90 mm. The pressure dynamics were normal. The cells numbered 240, of which 80 per cent were mononuclears. The initial hemogram revealed 14.2 Gm. of hemoglobin, the red blood cells numbered 4,150,000 and the white blood cells 9,400 per cu. mm. of blood, with 68 per cent neutrophiles, 3 eosinophiles, and 29 lymphocytes. The urinalysis was not performed on admission because of incontinence of the patient. Daily treatment consisted of the injection of 3,000 c.c. of glucose in saline intravenously, spinal puncture, 5 c.c. of Solu B, plus 50 mg. of thiamine chloride given intramuscularly, 90 grains aspirin given orally, the use of calamine lotion for the rash, and the administration of pantopon and nembutal to control restlessness.

COURSE IN HOSPITAL

On the second day of hospitalization the general condition of the patient was about the same. She was still comatose and unresponsive. B.U.N. was 18 mg. per cent and N.P.N. 42.8 mg. per cent. Spinal puncture was done with an initial pressure of 18 mm. Hg and after removal of the fluid, the pressure was 6 mm. Hg. Analysis of the fluid revealed 215 white cells, a differential of polymorphs 22 per cent, lymphs 70 per cent, mononuclears 8 per cent, globulin 3 plus, and total protein 415 mg. The fluid appeared slightly cloudy. The blood sugar was 123 mg., and the blood chlorides 700 mg. Wassermann and Kahn tests were negative. Lange's colloidal gold reaction showed a 0–0–1–2–2–3–2–1–0–0–0 or atypical zone II curve indicating meningo-encephalitis. At this point, in view of the daily spinal punctures and the danger of bronchopneumonia in this obese, comatose patient, it was decided to institute penicillin therapy of 100,000 units intramuscularly 4 times daily. Ascorbic acid, 150 mg. daily intramuscularly, was begun.

On the third hospital day the patient was more alert. She answered an occasional question in the appropriate monosyllable and seemed to recognize people around her. She was also reacting to the pain of the herpes rash. The bladder became quite distended requiring catheterization and the removal of 1,200 c.c. of urine. A spinal puncture was done, and the initial pressure was 14 mm. Hg, which was reduced to 6 mm. Hg. The cell count was 164. The globulin was 2 plus. The total protein was 275 mg., and its appearance was clear. The colloidal gold reaction was 0–0–1–2–2–3–2–1–0–0–0. Urinalysis showed 1 plus sugar but was otherwise negative.

The following day the patient was still more alert. She carried on bits of conversation and answered questions readily at times. A spinal puncture was done on this day and revealed an initial pressure of 4 mm. Hg. The spinal fluid was at first slightly bloody due to a traumatic tap. Subsequent specimens were clear. Manometric readings were normal.

On the fifth hospital day the patient was definitely improved and freely communicative. Neurologic examination at this time was negative except for moderate back pain on performance of Kernig and Brudzinski tests. Intravenous feedings were discontinued as well as penicillin. The total dose of penicillin given was 3,500,000 units. Spinal punctures were also discontinued.

There was continued clinical improvement the next day. The herpes zoster rash was definitely fading. A urinalysis 24 hours after the discontinuance of intravenous glucose solution showed a 2 plus glucose in the urine, and a fasting blood sugar was ordered. Thiamine and B-complex were discontinued.

On the seventh day the fasting blood sugar was 181 mg. per cent. It was thought that the patient was probably a mild diabetic, and she was put on a diet of the following: C 160, P 100, F 60. No other therapy was given.

For the next 3 days the patient was apparently convalescent. No physical or neurologic sequelae were demonstrable. She used the commode at first and later enjoyed bathroom privileges without undue fatigue. She was discharged from the hospital 10 days after her arrival, completely asymptomatic. The herpes zoster rash continued to fade. Blood Kahn and Wassermann tests were reported negative.

The temperature had ranged from 98° to 101° F. in spiking fashion until the fifth day of hospitalization when it dropped to normal and remained flat thereafter. The pulse was concordant.

A report was subsequently received from Dr. Joseph E. Smadel of the Army Medical Center, Walter Reed General Hospital, to whom we had submitted a specimen of the spinal fluid. His report read as follows: "No virus isolated from spinal fluid inoculated into mice or embryonated eggs."

One month after the onset of her illness the patient returned for a follow-up spinal puncture. Examination of this fluid revealed a clear specimen of 8 mm. Hg pressure. The globulin was 1 plus. The total protein was 75 mg. The cell count was 8. The Lange colloidal gold reaction gave a 0–0–0–0–0–0–0–0–0–0 result with a beginning color change in tubes 4, 5 and 6. The Wassermann and Kahn reactions were negative.

COMMENT

That this patient suffered from an encephalitis of the viral type seems hardly debatable. The sudden onset of delirium and light coma occurred in an individual without evidence of any preexisting or predisposing physical condition other than the herpetic rash.

Focal neurologic signs were few. There was definite stiffness of the neck, and the Brudzinski and Kernig tests were positive. The central nervous system seemed hardest hit in the conscious sphere or sensorium. This was characteristic in a definite percentage of the cases of herpetic encephalitis reported in the literature.

Spinal fluid findings consisted of an increase in fluid pressure, a definite increase in cells predominantly of the lymphocytic series, an increase in protein content, and a moderate increase in spinal fluid sugar on one occasion (123 mg.). In addition, the spinal fluid on all occasions gave a zone 2 curve typical of meningo-encephalitis. It is interesting in this connection that Brown and Dujardin in an analysis of the spinal fluids of a large number of cases of uncomplicated herpes zoster found that on the whole the highest estimates were found in those cases with slight eruptions. This patient's striking but brief clinical episode may be related to these findings. Nevertheless, the exanthem was very definite and lasted 3 weeks.

It may be argued that the penicillin given this patient was a factor in her quick recovery. However, signs of clinical improvement were beginning at about the time of the first penicillin injection, and the literature contains no unequivocal evidence of the amelioration of viral infections by this antibiotic. Our only intention in giving penicillin was to protect against pneumonia or the introduction of bacteria by repeated spinal puncture.

Another "red herring" introduced in the study of this case was the finding of a blood sugar of 181 mg. The test was suggested by the presence of a 2 plus urine sugar some 24 hours after the discontinuance of intravenous glucose. In this connection, the spinal fluid findings and the neurologic examination were certainly not suggestive of a diabetic coma. Moreover, a repeated blood sugar estimation several weeks after the patient's release from the hospital showed almost an identical result (191 mg. per cent).

Complete cure of the encephalitis was indicated by the complete normality of the spinal fluid when tested 3 weeks after the patient's release from the hospital.

The fact that inoculations of the spinal fluid from this patient into mice and embryonated eggs failed to reveal a virus does not disprove a viral etiology for the encephalitis. Other investigators have similarly failed to recover a virus in their cases. This would seem to justify the claims of those who believe the complicating encephalitis to be of allergic origin.

SUMMARY

It is believed that the case reported represents a mild encephalitis of viral etiology directly related to a herpes zoster eruption of the thorax. Absolute proof of the type and extent of pathologic involvement of the brain tissue in this patient was happily prevented by her recovery.

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RECENT ADVANCES IN CANCER

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RADIOISOTOPES IN CANCER DIAGNOSIS AND THERAPY

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There are two types of radioactivity, naturally occurring radioactivity and artificially induced radioactivity. With the discovery of the naturally occurring radioactive properties of uranium compounds in 1896[1] and, subsequently, of thorium, polonium and radium, powerful physiological effects were almost immediately revealed. The application of these agents to the treatment of cancer soon followed, with only meager information about the physical properties of the radiation being utilized.

Through the succeeding years, increasing knowledge of the structure of the atom has notably enhanced the usefulness of radioactive substances in treating cancer and has stimulated scientists in their efforts to produce artificial radioisotopes. In 1934 Curie and Joliot[1] found that, if certain elements were bombarded with alpha particles, positrons were emitted, and, if the source of the alpha particles were removed, the emission of positrons continued, but at a diminished rate. All radioactivity decreases with time and is expressed in terms of decay. By "decay" is meant that the amount of the original element present becomes less and less, as a result of the fact that the nuclei are disintegrating through the ejection of alpha and beta particles. When the remaining activity of the radioisotope represents one half of the original amount, this becomes known as the "half-life." This factor is of great importance in selecting radioactive material for experimental or clinical use.

Artificial radioisotopes[1, 2, 3, 4] may be produced by bombarding atoms with various particles from other atoms, such as neutrons, protons, or alpha particles. The bombarding particle may remain in the nucleus of the element exposed; it may pass through the atom's nucleus; or it may knock out some portion of the nucleus. The newly formed or changed atom may be stable, or it may break down at once. Disintegration occurs over a measurable period of time in many radioactive substances. It is reflected in the emission of beta particles, gamma rays, or both. When such rays, emitted from a radioactive substance, strike near-by atoms, electrons may be thrown out of the atom's orbit and leave the atom conductive of electricity. Such an atom is called an "ionized atom." These ionized atoms, secondarily produced by the disintegrating radioisotope's emission of particles, make it possible to detect the presence of and the quantity of the radioisotope present. This measurement of radioactivity present is accomplished by the use of instruments called ionization chambers and Geiger-Müller counters.

The artificial radioisotopes may be produced by the cyclotron and by other types of generators which produce bombarding particles. The largest source of isotopes today, however, is neutron bombardment of elements by chain-reacting uranium piles.

Two general types of investigation with radioisotopes in the study and treatment of cancer are being carried out:

I. Because of the extreme sensitivity of detection and the unique specificity of the isotopes as tags, they are of tremendous value in identifying certain types of cells. They permit the study of the process of nutrition and growth, normal and abnormal; absorption; conversion; and assimilation and excretion of nutritive compounds in animals and man.

The employment of isotopes as biologic tracers is exemplified by the use of tracer iodine (I^{131}) in patients with thyroid cancer[5] demonstrating that there is a fundamental difference between the normal and cancerous tissue of the thyroid gland. Because radioactive iodine, which emits both beta and gamma rays, has specificity for thyroid tissue, it becomes an excellent tag for studying diseases of the thyroid gland.[6, 7, 8, 9, 10] The rate of its disposition may be followed by simply holding a Geiger-Müller counter near the body.

Clinical studies on the uptake of tracer doses of radioactive phosphorus (P^{32}) by tumors of the breast have yielded some interesting observations. McCorkle and his associates[11] have found that malignant tumors of the breast and related metastatic deposits show an increased absorption of radioactive phosphorus. Inflammations of the breast, with or without the presence of cancer, also showed such an increase in the absorption of phosphorus. This is of some diagnostic significance if the cancer or the infection is located in the superficial portions of the breast (not deeper than 0.5 cm.). Differential Geiger-counter readings are made by comparing readings over the tumor with readings over other comparable parts of the body.

The use of various radioisotopes in tracer amounts as diagnostic aids, both in the detection of cancer and in the study of many other processes, may well be their most important use in the future.[12]

II. A second type of investigation with radioisotopes in cancer is their employment to supplement or replace X-rays and radium in treating cancer and allied diseases. The problem is complicated and is encumbered with a complex combination of factors. The disintegration rate of radioactive atoms is specific for each element. The biologic effect also varies with the characteristic radiations of each element. The ability of the tissue for selecting the element or compound limits the amount of isotope absorbed. In spite of the array of variables encountered, radioisotopes have added another possibility of improved cancer therapy.

Let us refer again to the specificity of iodine for the thyroid tissue. Marinelli, Foote, Hill and Hocker[5] have shown that certain types of thyroid cancer possess ability to accumulate radioactive iodine (I^{131}) while others do not. The structure of the tumor is an important factor in determining this. The more cellular the growth, with absence of normal glandular arrangement, the smaller the amount of radioactive iodine that will be deposited in the gland. The consensus at the present time is that radioactive iodine has not been an effective method of treatment in thyroid cancer because of this and other factors. It must be said, however, that when human tolerance for radioactive isotopes is better understood, doses of greater intensity may be possible. To date, about 1 in 5 cases of thyroid cancer shows definite response to radioactive iodine.

Radioactive phosphorus (P^{32}) is deposited selectively in bone and in the nuclei of rapidly multiplying cells. It irradiates the blood-forming tissues and retards the production of blood cells by the bone marrow.

Clinical reports on the use of radioactive phosphorus on certain blood dyscrasias have been made by Erf,[13, 14] Kennedy,[15] Hoster and Doan,[16] Erf, Tuttle, and Lawrence[17], Lawrence, Low-Beer and Stone,[18] Craver,[19] Warren,[20] Doan and associates,[21] and Hall and others.[22]

Erf[13] reports 138 cases of polycythemia rubra vera which have been treated with radiophosphorus (P^{32}). This agent has a half-life of 14.3 days and emits beta radiation. The radiophosphorus was administered intravenously as a sterile isotonic solution of sodium acid phosphate, containing radioactive phosphorus. The average dose administered varied between 5 and 10 mc., and was given in from 1 to 20 c.c. of solution, according to the concentration of radiophosphorus. Since the life span of a red blood cell is about 100 days, the second dose of radiophosphorus, if needed, was not given until approximately 3 months after the first dose. Maintenance doses were given at 1- or 2-year intervals, as needed. The presence of secondary polycythemia or pseudopolycythemia was ruled out in all patients. Of 20 cases of primary polycythemia treated with P^{32}, presented in detail by Erf, 17 showed satisfactory hematologic and clinical remissions of from 6 months to 3 years.

Leukopenic myeloid leukemia, as a terminal event in polycythemic patients receiving spray X-irradiation, has been reported by Tinney et al[23] as occurring in 10 per cent of patients so treated. None of these patients had been treated with radioactive phosphorus. Erf,[13] in reviewing the results of clinics treating polycythemia with radioactive phosphorus, recorded 5 deaths, 3 of which were due to leukopenic myeloid leukemia. One naturally wonders whether the acute leukemic states which have occurred in some cases are due to the drug or are associated with the natural course of polycythemia.

Doan and his associates[21] have recently published an analysis of the results in the treatment of 100 patients with radioactive phosphorus, including polycythemia rubra vera, lymphatic, myelogenous and monocytic leukemias, Hodgkin's syndrome, metastatic carcinoma and sarcoma, mycosis fungoides, and exfoliative dermatitis. They found that radioactive phosphorus was of greatest value in controlling the clinical and hematologic manifestations of polycythemia rubra vera and was a valuable adjunct in treating some of the more chronic leukemic states, especially those cases which had become intractable to roentgen irradiation.

In myelogenous leukemia the blood picture was suppressed, but X-ray therapy was necessary to control the size of the spleen. Only an occasional brief favorable effect occurred in the acute leukemias. Hodgkin's disease could not be controlled by this therapy.

In 4 patients with multiple myeloma and 5 patients with malignant neoplasms metastasizing to bone, temporary relief from pain was obtained, lasting from 2 weeks to 6 months.

Radioactive gold, sodium and manganese have also been useful in treating chronic forms of leukemia and certain lymph-gland diseases, such as lymphosarcoma and Hodgkin's disease.

Hahn and Sheppard[24, 25, 26] have reported the use of colloidal sols containing radioactive manganese (Mn^{54}) in selective internal radiation therapy of diseases of the lymphoid system. They obtained effective remissions in some of the lymphomatous diseases. Manganese, however, was difficult to obtain and, since then, the radioactive isotope of gold (Au^{198}) was selected for therapeutic use.

The half-life of gold (Au^{198}) is 2.73 days, and it is both a beta and gamma radiator. The gamma radiation was of particular value in enabling the investigator to measure the localization and relative degree of concentration of infiltrated material. It was felt that the half-life of gold was ideal in therapy, since the patient received three fourths of the radiation from a given dose in about 5.5 days.

In the case of the gold sols it was found by the use of a directional type of counter that the radioactive material remained in the tissues in which it had been deposited, chiefly liver and spleen, as long as measurements could be made. Because of this and other chemical characteristics of metallic gold, it was felt advisable to determine whether the insolubility of gold colloid in body fluids could be used to advantage in direct infiltration of neoplastic tissue. Hahn found that direct infiltration of insoluble radioactive colloidal solutions of gold into tissue is apparently a suitable method by which to deliver a given amount of radiation to a discrete mass of tissue, under certain circumstances. This material can be infiltrated into tissues which are inaccessible to X-ray and radium therapy, and a few regressions in some tumors so treated are reported. The cellular structure or vascularity of the tissue may be such as to preclude the retention of solutions injected. Because of this, Hahn has suggested that radioactive silver nitrate, with its cauterizing properties, might possibly be used as an alternative metal.

Radiosodium (Na^{24}) has been used by Evans and his associates[27] in treating polycythemia rubra vera, chronic myeloid leukemia, and chronic lymphoid leukemia. In a preliminary report they indicated that it was an effective agent in reducing symptoms and that its effects resemble those of spray X-ray therapy.

Radioactive strontium (Sr^{89}) has been used to irradiate osteogenic sarcoma. Pecher[28] and Treadwell and his associates[29] report studies indicating its use in bone metastases and in certain bone tumors. There is evidence, however, that much danger exists in the therapeutic use of this metal.

Geschickter, Copeland and their associates are undertaking the study of Ca^{45} in the form of an organo-metal, both as a tracer and as a therapeutic agent in the treatment of neoplastic disease.

Despite the number of investigators who have made favorable contributions in the use of radioisotopes as therapeutic agents, the medical profession must make haste slowly in this direction. The realization of a tool to replace standard methods of radium and X-ray therapy is not yet at hand.

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President's Page

THE UNDISCOVERED DIABETICS

The medical profession is familiar with the fact, as shown by a study in Massachusetts, that there exist many more cases of diabetes than had previously been recognized. The bringing to light of this fact emphasizes the old truth that in medicine eternal vigilance is the best service we can give to our patients; that the things left undone in an examination, such as chest X-rays, blood serology, and the examination of the urine for sugar, and especially inadequate physical examination, are the cause of many more mistakes than lack of knowledge.

Professional and lay people interested in diabetes are making every effort to call the undiscovered diabetic population to the attention of the profession and the country. The District Medical Society should certainly be interested in this project, and every physician, whatever his special interest, should be alerted to the significance of the recent studies and their importance in relation to the future of diabetes in the United States.

John Minor

Editorials

THE HOSPITAL PROBLEM*

With all of the sound and fury about the financial plight of the hospitals, there is one belief that is zealously held by the parties who seem most concerned with the discussion. It is that the voluntary hospital as an institution should be preserved in an economy of free enterprise. Why then should there be such obvious mutual distrusts between the hospitals, the medical profession, and the general public? Each of these groups is vitally concerned at this time. Each is belligerently quick to resent any insinuation that its real concern is not based upon a deep and abiding devotion to the care of the sick. The hospitals and public take for granted that physicians should be willing to give their services free to the patients who are certified as eligible to receive Community Chest financial assistance. The hospitals seem to feel that it is no imposition whatever on the physicians to expect them to give their services to staff patients of the hospitals on selection by the hospitals themselves, even if such patients have not been certified to receive Community Chest help. The Community Chest takes it for granted that the physicians should not only give their services free throughout the year to Community Chest patients, but that they should also contribute generously in the annual drive for funds. The physicians feel that they are entitled to representation on the boards of the hospitals, and certainly that they should be included in such a round table for discussion of hospital administration as the Hospital Council. In setting up the Hospital Council, the hospitals have specifically provided against representation from the medical staff as such. After all, who owns the voluntary hospitals—the physicians, the hospital boards of trustees, the hospital administrators, or the general public?

The hospital board is responsible for maintaining the institution and all of its services. Physicians alone give medical care to the patients. But the general public certainly furnishes the money to foot the bills. When there was ample money available to hospitals, there was no deep concern as to whether it came from a few philanthropists, from charges to private patients high enough to absorb the cost of the charity patients, or from that larger portion of the general public disposed to contribute through the Community Chest. If all three of these sources of money are now insufficient, the only certain way to obtain it from the entire general public is by taxation, from which there is no escape. That would mean Government ownership and control. Everybody would give whether or not everybody benefited. Under which system of financing would better hospital management and better medical care be available?

Industrial cities such as Chicago, St. Louis and Cleveland have large corporate gifts available for their Community Chests. The corporate gift does not include payroll deductions or individual contributions from its employees. Indeed, the corporate gift is given, if not with the knowledge, at least without reference to the consent of the employees. The largest single industry in the Washington Metropolitan Area is Government. Its employees constitute a large proportion of the general public. Government employees also constitute the largest block of individual contributors to the Community Chest. These fine people, even though not domiciled here, have year after year demonstrated their generosity to the community needs by their voluntary gifts to the Community Chest. The average age of Government employees tends to drop with each change of administration. The younger these people are who are domiciled elsewhere, the more likely they are to remember the Community Chest or other charities back in their home states. If their financial support of the hospitals is to be obtained, whether through gifts to the Community Chest or to a united hospital drive for funds, they must not find it too difficult to obtain hospital care when acute illness or prolonged hospitalization throws them into financial distress. This is true not only for Government employees, but for all other members of our local general public.

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* This is the twenty-ninth in a series of guest editorials by well known physicians and laymen.

Some years ago the hospitals were annoyed by the practice of patients shopping. Many instances were known of a patient receiving care at the same time in the outpatient departments of three or more hospitals, neither one of which knew that the other was involved. This meant duplicated costs of diagnosis for which somebody, the community, had to pay. Many patients well able to pay part of the cost of their care were receiving total subsidy from charitable sources: the hospital, the doctor, and the Community Chest. With the full support of the hospitals, the physicians and the Community Chest, a central admitting bureau was inaugurated to conserve both services and funds, and to prevent waste from duplication. A nonprofit corporation was established with equal representation from the hospitals, the medical and allied professions, and the general public. The philosophy of this corporation can be set forth as follows: that the primary concern of all three groups is the provision of medical and hospital care for all persons who need it, and particularly for those who are unable to pay for it out of their own resources; that the voluntary hospitals, by pooling their strength and resources in a community-wide coöperation, can serve more effectively the objectives to which each individually is dedicated; that the greatest good to the greatest number at the least possible cost is obtainable by the coöperation of each of the three groups with the other two. This nonprofit corporation is still functioning in our community. It desires to serve the whole community. It desires to help the hospitals, the physicians and the Community Chest Federation. It feels there is no inconsistency in the loyalty it owes to each of these three groups. In order to emphasize its particular interests in helping the hospitals, it has changed its corporate name from Health Security Administration to Hospital Service Agency.

All of us earnestly desire to preserve the voluntary hospital. In spite of the sound and fury, we must find a solution. This is only possible if all interested parties—hospitals, physicians, Community Chest, H.S.A., and other official and nonofficial health agencies—coöperate

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THE WASHINGTON TUBERCULOSIS SURVEY

Case-finding by means of roentgen examination of the chest is now recognized as the chief means for tuberculosis control. Photofluorography has been perfected to such a degree that mass surveys of large units of population are now entirely practical. Only a few such surveys have been made, the largest being that which was carried out in Washington from January 12 to July 1, 1948.

A complete analysis of the results of the survey will not be available for several months but some tentative conclusions are already justified.

A total of 503,398 individuals had 70 mm.

films made during the survey, and of this number 16,206 showed changes in the chest which necessitated further examination by means of 14 x 17 films, resulting in the finding of 5,352 cases diagnosed as tuberculosis (1.3 per cent), 1,540 cardiac cases (0.3 per cent), and 2,269 (0.5 per cent) with other pathology. Of the 5,352 cases of tuberculosis, 83.4 per cent were diagnosed as minimal. A significant fact disclosed by the survey is that only 567 of the cases of tuberculosis discovered were on the tuberculosis registry of the Health Department. The importance of a method which discloses approximately 5,000 cases of tuberculosis, the majority with minimal involvement, in a city the size of Washington can hardly be exaggerated.

The aspect of the problem which needs the greatest emphasis at the present time is one which seems obvious but which in practice has not been dealt with in any systematic or adequate manner, namely, the follow-up, management, and treatment of the individual patient once the disease is discovered. It must be increasingly appreciated that finding the case is only the beginning of the effort to make a mass survey successful. It is true that the local Health Department must have a central place in tuberculosis control since the registry, hospitalization and laboratory service for the tuberculous patient are in its hands, but the tendency to throw the entire responsibility upon the Health Department must be combated. One of the most important lessons learned in both the Washington and Minneapolis surveys is the fact that the success of a survey and the final control of tuberculosis rest especially upon the general practitioner, the specialist in diseases of the lungs, and the radiologist.

The following observations are based upon experience during and following the recent Washington survey:

1. The ultimate effect of a chest survey campaign will depend largely upon the subsequent management and treatment of the cases disclosed by the survey. This responsibility falls not only upon the local Health Department but particularly upon the physicians of the community.

2. Radiologists and chest physicians occupy key positions in the discovery, the differential diagnosis, and the treatment of tuberculosis. Both should have an active part in the organization and conduct of case-finding campaigns and in subsequent plans for follow-up and management of the cases found. They have a special responsibility to assist in the dissemination of information to the general profession. Attention is directed especially to the following points:

a. Evaluation of a case with regard to activity and type of treatment to be instituted should not be based upon X-ray examination alone and never upon a single film.

b. Roentgen examination of the chest in frank or suspected tuberculous lesions is too often carried out in a casual or routine manner. Good stereoscopic films are important but the roentgenologist has not met his full responsibility in a case until he has exhausted every means that his method affords to throw every possible light on the extent and nature of the lesion. This includes comparison, whenever possible, with films previously made; routine examination in oblique and lateral projections and often in the lordotic posture; body section films whenever there is the slightest question of the presence of cavity or tumor mass; and bronchography whenever indicated.

3. The differential diagnosis between tuberculous and nontuberculous lesions must be approached with great care. Too many cases of atypical pneumonia are being diagnosed as tuberculosis and hurried into sanitarium treatment, and too often there is delay in operation on early bronchogenic carcinoma because atelectasis or tumor mass is mistaken for tuberculous consolidation. Such mistakes can usually be avoided by a proper appreciation of the value

of the tuberculin test, the significance of the absence of tubercle bacilli in repeated examinations of the sputum and by more frequent bronchoscopic and biopsy examinations.

4. The Washington survey has demonstrated a definite value of the mass survey in disclosing the presence of a considerable number of lesions within the chest other than tuberculosis. There were 1,540 cases (0.3 per cent of the total number examined) who showed definite abnormalities in the size and contour of the heart. All of these were referred to their physicians for further study. There were 2,269 cases, excluding the cardiacs, (0.5 per cent of the total number examined) who showed lesions other than tuberculosis. No definite statistics are available regarding these but some were diagnosed as bronchogenic carcinoma, some as lymphoblastoma, one as adenoma of a bronchus, two as solitary bronchogenic cysts, and several as bronchiectasis. The survey thus has a considerable value in disclosing diseases other than tuberculosis.

5. The survey emphasized the great importance of education of the general practitioner in modern methods of diagnosis and treatment of tuberculosis. He must learn to appreciate the value and limitations of roentgen examination of the chest; the indications for special types of examination (tuberculin testing, laboratory tests, etc.); and the criteria upon which the type of treatment can be based. He must realize his responsibility to coöperate with the Health Department by making periodic reports and furnishing other data on cases under his care. He must inform himself of facilities available in his community in the nursing and social service fields for follow-up and care of his patients and make full use of such services.

6. Finally, the survey has greatly accentuated the need for more hospital beds for those suffering with tuberculosis in Washington, for more doctors and nurses to care for them, and for increased laboratory facilities and personnel in the Tuberculosis Division of the Health Department. The physician as a citizen owes a duty to his community to take a leading part in efforts to establish adequate hospital and public health department facilities and personnel for the care of the tuberculous patients of this community.

ARTHUR C. CHRISTIE, M.D.

THE CANCER BULLETIN

The District of Columbia Division of the American Cancer Society, through its Executive Committee, will prepare a series of articles to be published in the MEDICAL ANNALS. This section of the journal, to be known as *The Cancer Bulletin*, will be sponsored by the Cancer Control Committee of the District Medical Society. However, funds to cover the complete cost of this *Cancer Bulletin* will be provided by the local Division of the American Cancer Society as part of its educational efforts.

Washington physicians who are particularly interested in certain phases of the cancer problem will contribute the articles. They will be asked to present the latest scientific knowledge in their special field of work. It is anticipated that their contributions will be of definite aid in understanding the problem of cancer and coping with it more effectively.

The first of these articles, written by Dr. Murray M. Copeland, Professor of Oncology, and Dr. C. F. Geschickter, Professor of Pathology, both of Georgetown University Medical Center, concerns the use of radioisotopes in cancer.

The articles are to be arranged in the ANNALS so that they may be removed each month without disturbing the continuity of the journal. Thus, at the end of the year, one could bind the twelve articles and keep them together in one small volume for reference purposes.

It is hoped that *The Cancer Bulletin* will forge another link in the close and friendly association which has existed between the District Medical Society, through its Cancer Control Committee, and the local Division of the American Cancer Society.

Murray M. Copeland, M.D.
Chairman, Cancer Control Committee

In and Out of Focus

BY THE OBSERVER

Washington Physicians Honored

Outstanding features of the 19th Annual Scientific Assembly were reviewed briefly by your Observer in the October issue of the Medical Annals. Mention was made of the impressive ceremonies attendant upon the presentation of certificates for meritorious service to two of Washington's prominent physicians, Drs. Arthur C. Christie and Joseph Stiles Wall.

Time and space did not at that time permit elaboration on this event. In this month's column, your Observer wishes to make a more complete report on what was not an ordinary occasion. The physicians honored were of a distinguished company of whom our physicians may well be proud.

What made Drs. Christie and Wall outstanding among their fellows? As their friends know, they are both men of integrity and of high ideals. Where their professional attainments are concerned, they have very much in common. They have enviable reputations nationally as specialists in their respective fields.

Dr. Christie is a native of Pennsylvania, and the son of a doctor. His career embraces distinguished service with the Army Medical Corps, high posts in Washington medical schools, and the presidency of numerous scientific bodies. From 1919 to 1929, he was Professor of Radiology at George Washington University School of Medicine. During the following 16 years, he was Clinical Professor of Radiology at Georgetown University School of Medicine. The organizations of which he has been the president are the Fifth International Congress of Radiology, the American Roentgen Ray Society, the American College of Radiology, the American Board of Radiology, and the Medical Society of the District of Columbia.

Eminent though he is as a physician, Dr. Christie is a recognized authority in the medical socioeconomic field. He has been in the forefront of the group which favors experimentation in an effort to improve the quality and the quantity of medical care for the American people. He served as a member of the history-making Committee on the Costs of Medical Care. Always active in the community, he has given leadership to many civic undertakings.

It was most appropriate then that the certificate awarded him was "in recognition of his outstanding contributions to medicine and society." The certificate further states that as "a public-spirited citizen, he has by his unflagging interest and wholehearted endeavor greatly advanced the cause of better medical care."

On accepting the award, Dr. Christie responded with characteristic modesty as follows:

> "I have no words to express my appreciation of this honor. My feelings just now are a mixture of pride and humility: pride, when I remember that my own colleagues in my own medical society have deemed me worthy of this recognition; humility, when I reflect how little it is deserved. When the President of the Society was reciting the reasons for the presentation of this certificate I

resolved to govern myself by the implied advice in a statement I once heard that 'flattery is like smoking, it doesn't hurt you much if you don't inhale it.'

"I have one just cause for pride, however, in that I am permitted to share these honors with one who has honored me by his friendship for many years. Dr. Joseph S. Wall is held in the highest respect and affection by the members of the medical profession and the people of this community and is recognized as one of the leading physicians of this city and of the Nation. I am grateful that I am permitted to share the honors of this occasion with him.

"Mr. President, may I ask that you convey to the Medical Society of the District of Columbia and to its officers and Executive Board my grateful thanks and highest appreciation for the certificate which you have presented to me."

Dr. Wall is a native Washingtonian. His career spans more than a half century, during which he has been a member of the medical staff of Children's Hospital. He joined the faculty of Georgetown University School of Medicine shortly after graduation and became Professor of Pediatrics in 1912. Later he was made head of his department.

Few pediatricians in this country are as well and favorably known as Dr. Wall. Affectionately regarded by his patients as well as his associates, his scientific abilities are highly respected.

He was President of the Medical Society of the District of Columbia in 1926, and President of the American Academy of Pediatrics in 1945. In 1947, he was awarded the Carlos J. Finlay Medal at the Pan American Congress on Pediatrics for his services in advancing intercontinental pediatrics.

Like his colleague, Dr. Christie, he has also made outstanding contributions as a citizen. More than anyone else, he is responsible for the present Healing Arts Practice Act in the District of Columbia.

In his usual charming manner, Dr. Wall accepted the Society's award. He said:

"I deeply appreciate the honor of receiving from the Society the award just conferred upon me.

"Our President has remarked that I was born in Washington, of which I am quite proud; which reminds me that Julius Caesar was once asked by an ancient Italian how he happened to be born in Rome. Caesar replied that it was because his mother was staying there at the time. The same circumstance applies to me concerning the place of my birth!

"Leaving aside any spirit of braggadocio or tooting one's horn, I do claim, without challenge, to be, chronologically speaking, the earliest and youngest physician in this room ever to have first attended the sessions of the Society.

"That occasion happened many years ago when I was a small boy in short pants, the circumstance being that my mother was rather seriously ill and, because of a temporary turn in her condition and the absence of telephones in every home, I was dispatched to fetch the doctor. The attending physician was one of the stalwarts of the Medical Society in those days, Dr. W. W. Johnston.

"Speeding to the Medical Society's meeting place, then in the old Georgetown Law School building on E Street, I ferreted out Dr. Johnston, but he bade me to be seated at his side as an important discussion was in progress. He did not seem to be as agitated nor as hurried as I was because of my errand, so for some time I sat down and tried to absorb the words of wisdom uttered by the learned members of the Society. This circumstance, no doubt, precipitated me into the study of medicine, aided and abetted by one other urge, namely, my juvenile desire to drive a horse, it mattered not the least whether attached to a coal cart, a fire engine, or a doctor's buggy. Lo and behold, the time arrived after graduation when my wish was fulfilled and I had my horse for several years in the horse-and-buggy days before the advent of this perilous machine age!

"A corollary to this tale is that after several years, when my trousers had been lengthened to conform to the new look and I had grown sufficiently in stature in the other direction, I was admitted to the Medical Society, and, in the course of time, became a member of its Executive Committee. Upon one occasion this Committee was called upon to decide the acceptance and hanging in our building of a portrait of Dr. W. W. Johnston which had been presented to us, but, according to the rules of the Society, had to be censored by the Executive Committee, before which the painting was then unveiled. When it came my turn to speak, I protested that the face of Dr. Johnston represented in the portrait was not that I had looked upon when I uttered my first squawk when ushered into this world by him, as he was my personal obstetrician. You are aware that the psychiatrists, among other weird beliefs, claim that these early impressions upon the infantile mind are most lasting! Needless to say, the portrait was never hung in the Society's Hall of Fame!

"Aside from this certificate of service, the Society has given me much. Year by year, month by month, and week by week up to this very week of our 19th Annual Assembly, it has given me a continuing postgraduate medical education. But a far greater asset has come to me, that of the privilege of association with and of possessing the friendship and comradeship of the fine men and women who make up its membership. So I may say without challenge that because of this, my life (now a rather long one) has been cast in pleasant places. Thank you!"

Others have been and will be honored by the Society in years to come. However, none will be more deserving of the recognition shown them than Drs. Christie and Wall.

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Membership Problems Due to the unprecedented growth in population of the Nation's Capital since the close of the War, there has been a corresponding influx of physicians seeking to establish themselves. Evidence of this has been the increase in the Medical Society's Active and Associate membership from approximately 1,100 in 1941 to 1,600 in 1948. That the maximum number of physicians who plan to establish themselves in Washington and its suburbs has not been reached is shown by the number of applications being received at the Society's Executive Offices. There are at the time this is written some 60 applications to be acted upon, a majority for Active membership.

This development has brought with it membership problems common to large cities bordering on a nearby state, with this difference: the District of Columbia is confined to an area of only ten miles square, and is bounded by two states, Maryland and Virginia. The complications which have ensued are therefore greater and more difficult of solution.

The Society's Executive Board has had some of these problems under consideration for several months and will submit its recommendations for the consideration of members sometime in the course of the organization year. One of these relates to the rapid development of suburbs of Washington, all of which are situated in adjoining states.

Not a few physicians have deemed it advantageous to establish two offices, one in Washington and another in the suburbs. The question then arises in what jurisdiction they should hold their membership. The By-laws of the American Medical Association specify only that they must be members in the jurisdiction where they have their offices. They are not permitted to become full members in more than one state medical society. It would seem that all these physicians would have to do is to make their choice.

For some it is just that simple, but for others it places them in a quandary. While they may, for reasons of their own, feel it desirable to apply for membership in a nearby county medical society, they may also wish to take advantage of the facilities of the District Medical Society. Here they run into an obstacle because benefits are available only to members. Furthermore, they cannot affiliate themselves as Associate members because they are not eligible for that status.

Another situation in need of solution is that of Associate members who are in active practice in nearby Virginia and Maryland and who enjoy all the benefits of the Society except that of voting. Their dues are considerably less than those of Active members. However, a substantial part of their practices may be in the District, and frequently they have privileges in Washington hospitals.

To meet these situations, the Executive Board will propose an amendment to the Society's Constitution and By-laws which will place physicians in active practice within the Metropolitan Area and who can qualify as Associate members on approximately the same basis as Active members where dues are concerned. This will also apply to those who have offices in more than one jurisdiction until the

American Medical Association has had an opportunity to rule on their status.

There is no desire on the part of the Society's officials to be arbitrary. In fact, it is their sincere desire to coöperate fully with nearby county and state medical societies in a mutually satisfactory arrangement. They believe that this can be accomplished by conferences with officials of these organizations and that a satisfactory plan can be developed which will take into account further decentralization of physicians within the Metropolitan Area in the future.

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". . Suitable for the Pursuit of Medicine. . ."

Qualifications for the study of medicine have been widely discussed in medical journals. Sharp differences of opinion have been expressed in regard to present methods of selecting medical students. All agree that it is a difficult problem and one to which medical educators should give earnest and thoughtful consideration.

Some educators, such as Dr. H. C. Byrd, President of the University of Maryland, believe that too much emphasis has been placed on the high grades of applicants. Dr. Byrd would give priority to other qualifications which he believes more essential in the making of a good physician. But how to evaluate these qualifications in their proper relation to each other, he admits, is extremely difficult.

On this point, a correspondent, Ff. Roberts, writes the editor of *The Lancet** (London) as follows:

> "The rush to join the medical profession has created for the psychologists a problem which on their own admission will keep them pleasantly occupied for many years to come, and which will no doubt provide jobs at the public expense for many recruits to their ranks. This new research will, it can be confidently predicted, go the way of all other research, spreading in endless ramifications and never reaching finality. Already there is adumbrated the first extension—research into the selection of people suitable for the selection of people suitable for the pursuit of medicine."

The writer is certain that "The problem will be solved, not by the tests, matrices, and screenings of the psychologists, but by the study and correction, by minds untrammelled by the jargon of modern science, of the motives behind the abnormal desire for entry. The chief of these motives are four: snobbishness, the lowering of financial barriers, the call of idealism, and the search for economic security.

> "In regard to the first and second," he continues, "the easier the climb, the greater the number of climbers; we can only hope that the creation of new hills will ease the congestion on our own. To the idealism of adolescence medicine presents an appeal which is lacking in all other vocations except the Church. The doctor is noble and self-sacrificing, a beacon of virtue in this sinful world. In contrast, the business man is selfish and avaricious, flourishing on the exploitation of his fellow men. . . . The inevitability of the association of trade with social injustice is a doctrine which dies hard, being perpetually fanned into flame by many of our sociologists, who keep harping on the evils of the industrial revolution. The headmaster of one of our leading public schools tells me that there are twice as many boys leaving to take up medicine as there are doctors' sons. Many of them embrace medicine, scorning the family businesses where they are sorely needed.
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> "To many parents financial security is a prime inducement. After all, the sick will always be with us whatever happens. These people do not realize that prosperity in medicine depends entirely on the prosperity of our export trade. There can be no security in medicine unless that trade is secure. We ought to view with grave concern the prospect of the most intelligent of our youth being encouraged to shun commerce as something unsafe and unclean, and to seek financial security and moral salvation in a profession completely dependent on commerce. We may question whether the attempt to cream off the ablest into medicine is in the highest national interest.
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> "We must learn to see medicine and the community in their proper perspective. We must realize that, intelligence being limited in quantity, medicine cannot be enriched without the impoverishment of other vocations where it is needed just as much. We must educate youth and parents in a saner, more realistic, and less sentimental outlook."

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* September 11, 1948.

Another correspondent, T. B. Layton, proposes "As a signature tune to the main subject of [the Lancet's] educational number for 1948, . . . there is needed a kindly heart, a gentle touch, the control to keep a confidence, love of children, with the power to make a decision and to accept responsibility."

"An experience of 38 years," this correspondent writes, "in trying to choose the best men for appointments at the end of their student career has shown the difficulty of selection by whatever means. Nor does psychology as yet offer any way whereby the desired characteristics may be foreseen five to seven years before they have to come together into action."

While there is still no yardstick which will assure medical schools that those chosen for the study of medicine are the best that can be selected, it is encouraging that better methods are being sought. Whatever system is eventually adopted as most satisfactory, it seems to your Observer that none can be entirely effective which does not include a personal investigation of all individuals applying for admission who give promise of becoming good physicians. Top grades would not necessarily be a requisite, although scholastic attainment cannot be minimized. It may well be that the latter has been overemphasized and that students with average grades will be found to possess qualities which make them superior prospects for the study of medicine.

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More About Hospitals

Describing himself as a banker and hospital trustee who has followed "the growing costs of [hospital] operation with mounting concern," Mr. Lewis L. Strauss expounded his views on the financing of hospital care before the Fiftieth Annual Convention of the American Hospital Association held in Atlantic City last September.

Although well aware of the deplorable financial condition of voluntary hospitals, Mr. Strauss did not take too dim a view of their situation. "It seems to me," he said, "that the convergence of increased operating costs, increased demand for services, and decreased help from a few large givers will be productive of a radical solution and one that will place the problem of hospital care in its proper relation to our social economy."

"Education used to be for those who could afford it," Mr. Strauss observed. "At some point in the growth of social consciousness, it became apparent that illiteracy was a burden on the community, greater in its aggregate eventual cost than the cost of providing schooling. While somewhat nobler motives had place in the provision of elementary schooling for everyone, the transition from the simple availability of free education to its present mandatory status was for economic and social reasons. The other comparable concern which men must have for one another is the concern for public health. Altruism has its proper place here also, but it is in the plainest degree self-serving that my neighbor's health should be guarded as a protection to my own and the health of my family. Good health is a national asset and it can only be realized if some minimum of hospital care is available to everyone everywhere, just as in the case of elementary education. To be our brother's keeper proves to be enlightened self-interest.

"How can this philosophy be turned to practical account? First, it is necessary to review how hospitals are financed at present. I refer, of course, to general hospitals rather particularly for we have already solved part of the problem in the case of special institutions. Veterans' hospitals are a public responsibility with no debate as to the propriety of Government support. Payment for such things as tuberculosis sanitaria, psychiatric hospitals and places for the care of the chronically ill is already increasingly coming from Government sources. But what of the 4,000 odd general hospitals listed by the American Hospital Association? How do they get by?

"The present system, I understand, includes fees from patients who are able to pay, subventions from various governmental units (almost invariably, however, well below actual cost of the service), gifts from welfare organizations, insurance, and charity from religious groups and individuals. This is a disorganized, hand-to-mouth and insecure system. It is not really a system at all. For one thing, it does not allow fullest advantage to be taken of the constant advances in medical science. Such advances usually increase the cost of hospital care involving, as they do, new technics and new equipment. Radioisotope therapy is a case in point. The system has furthermore reached its elastic limit in respect to its largest item,—direct individual payment for services.

The necessarily high charges for hospital care are now, oftener than not, beyond the ability of the average individual to pay at the time he needs the service. It is imperative to find a method for more systematic and equable distribution of hospital costs.

"To those among us who believe in American Individualism, it will be a last resort to seek for a solution by turning to the Federal Government. There are great evils inherent in the further invasion of the lives of its citizens by the central government. The loss of much traditional self-reliance has been a tragic feature of recent years. It is high time to limit assumption by central authority of all the cares, responsibilities and even the duties formerly appropriate to the individual. Continuation of that trend can end only in an atrophy of those qualities of self-dependence which have made us a great nation.

"But a new idea can be introduced to the American mind, as revolutionary as was Jefferson's idea of free schooling. The hospital can be presented as a local agency which, since it operates solely in the broad public interest, deserves and requires public support in order to exist. This support should be initiated, however, as in the case of schools, at the local level. That would eliminate abuses since eligibility for care can be certified by those who know the facts. Local general tax funds can be made available on a basis of real—not nominal—cost for indigent patients, and the Federal Government's sole role would then be to set standards and, perhaps, to help out in an emergency. Fortunately municipal credit in the United States is generally high. The private independent status of the hospital must never be compromised and it must be free of political control or even influence. There need be no leveling down of service or costs for those able and willing to pay. Public education did not abridge private education for those who desired it.

"I believe that it would be relatively easy to convince the American people of the reasonableness, the value,—indeed, the stark necessity—for adopting such a plan countrywide. A proposal far less appealing could be 'sold' by a group of determined, devoted men, well distributed geographically, as are the members of this great organization, backed by the medical profession, who are interested in the highest degree and whose influence at the grass roots is without equal."

Mr. Strauss' solution for the ills of voluntary hospitals would hardly seem applicable to Washington. As everyone knows, public funds for the maintenance of hospitals in the District of Columbia are provided by Congress. Nevertheless, the situation in the Nation's Capital is not so different from that which exists elsewhere.

For example, Mr. Strauss suggests that "Local general tax funds can be made available on a basis of real—not nominal—cost for indigent patients, and the Federal Government's sole role would then be to set standards and, perhaps, to help out in an emergency." Apparently he is not disturbed by the probability of Government control where it sets standards—even in an emergency! The fact is that "emergencies" in many instances would become permanent, benefits provided broadened, and greater numbers of the population included.

Perhaps there is no other solution. If so, the situation should be faced realistically by our voluntary hospitals.

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An Objective Outlook

Among the organizations which met in Washington last September was the National Association of Medical-Dental Bureaus, Inc. Most of the Bureaus represented were privately owned. However, managers of business services operated by medical societies were also present. The four-day meeting was devoted to discussions of professional management, collection methods, budgeting and finance, centralized bookkeeping, telephone answering, and public relations.

Your Observer addressed the group on "Economic Trends." He devoted a substantial portion of his talk to matters which had been under discussion. Readers of this column may find the following observations of interest.

> "While things are happening in the medical world which do not make us too happy, there is no reason for deep gloom. This is a time when we must keep ourselves informed. . . . We must be vigilant in the face of rapidly changing social concepts. But most important of all . . . we must maintain a proper perspective.
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> "The importance of an objective outlook came to mind when I was told my subject was to be 'Economic Trends.' In thinking over what I ought to say, it occurred to me to look up the references under 'medical economics' in the Index Medicus. . . .
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> "With the assistance of my secretary, I examined the

references from 1930 to 1947, inclusive. I made a number of interesting discoveries, of one of which I was already aware: There are fads in titles as there are in other things. During the 1930's, the use of the word 'trends' was most popular. The titles of thirty-three articles listed in the Index Medicus contained this word. Along about 1942, a change was apparent. Titles were no longer concerned with 'trends.' 'Future,' as in 'The Future of Medicine,' 'Doctors in the Future,' and so on, had gained popularity. I was surprised to learn that 'crossroads' was not more frequently used, as in 'Medicine at the Crossroads.' Only seven times did I find this title in the years 1930–47. However, variations of 'change' or 'changing,' such as 'Medicine in a Changing Social Order,' was used thirty-three times during those years. Surprisingly, I did not find the word 'crisis' used very often. That probably will be in vogue for the next few years.

"Some writers apparently endeavored to avoid the usual titles. The result was as often comic as dramatic. Here are a few samples: 'Is It Twilight or Dawn?' 'Are We Heading for the Last Round-up?' 'Drifting Sands of Medical Practice,' 'Medical Practice in the Melting Pot,' and 'The Moving Finger Writes.'

"This is illustrative of what I mean by maintaining a proper perspective. Many matters are not so urgent as we think they are. Great social changes rarely occur suddenly. They usually develop over a period of years and even generations. Change is usually preceded by ferment, and the Lord knows we've had plenty of that in medicine in the past twenty or twenty-five years. Nevertheless, actual change still doesn't seem to be at hand, although the hue and cry goes on. Those on the far left cry for Government intervention in medicine as a means of saving lives. On the right, or right of center, the medical profession predicts dire consequences if a Government system of medical care becomes a reality.

"Now I would be the last to recommend a complacent attitude—far from it. I am equally convinced that hysteria and other degrees of emotionalism are unjustified. In common with many other observers, I agree that there has been too much heat in dealing with the problems of medical care and not enough logic.

"In the final analysis, what happens to medicine will depend very much on economic and social conditions in this country, the temper of the people, and the leadership of the medical profession. . . .

"So much has been written on the subject of medical economics and the relation of medicine to the social order, it is humanly impossible to read all of it. Undoubtedly much of it is not worth reading. Nevertheless, it is extremely important that we familiarize ourselves with the views of leaders on both sides of the medical controversy. I do it, even though I become very impatient with the lack of objectivity of writers on both sides."

"You, of course, recognize, as I do, that conditions never remain static in any field; certainly not one in which there has been as rapid progress as in medicine. There were never greater opportunities for you to render a signal service to the medical profession and the people than now. However, you must be informed in regard to the changes proposed in medicine, be able to discuss them intelligently with those with whom you come in contact, and keep in mind that it is of the greatest importance that you win friends for the medical profession. In doing so, you will win friends for yourselves. It is an undertaking that I commend to you as one which will be of benefit to all."

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Medicine in Early Washington

It is difficult to imagine a less intriguing title for a book than "A Chorographical and Statistical Description of the District of Columbia." Fortunately, Dr. William C. Woodward, former Director of the AMA's Bureau of Legal Medicine and Legislation, now retired and living in Washington, was sufficiently interested to explore its contents. What he learned should make enjoyable and informative reading, particularly for those who wish to acquaint themselves with medical practice in the early days of Washington.

Dr. Woodward informs your Observer that the formidably-titled volume was written by David Bailie Warden. Born in Ireland of Scotch ancestry in 1772, Mr. Warden received his A.M. degree from the University of Glasgow. The Dictionary of American Biography describes him as "a loyal Irishman, so loyal in fact that the British Government, because of something he had done, gave him the choice of a trial or of emigrating to America." He emigrated and became a United States citizen in 1804. Later he was private secretary to the United States minister to France. In 1810 he returned to the United States because there had been a change in ministers. He thereupon secured an appointment as consul in Paris, but was removed from that office in 1814 "on the ground that he had assumed the character of consul general, to which he had not been officially appointed. The remainder of Mr. Warden's life was spent in France, where he patriotically attempted to disseminate information regarding America." It was here that he wrote his book on the District of Columbia in 1816.

Mr. Warden reminds his readers that the population of "the territory of Columbia in 1810 was 24,023: that of the city was 8,208: of Georgetown 4,948."

With respect to the medical situation in the District in those days, Mr. Warden writes:

> "In Washington there are nine physicians, and two apothecaries who are also physicians; their fee in the city is a dollar a visit: in the country it is regulated by the distance. Young men, destined for this profession, usually study one or two years with a physician, and afterwards hear medical lectures one or two years more at the colleges of Philadelphia or Baltimore. For admission to the exercise of this profession there are no regulations; and any person, however unskilful, may exercise it, though in opposition to an act of the assembly of Maryland, of 1798, which not being rescinded, applies to the district of Washington. By virtue of this act a medical faculty was established in that state, with powers to select twelve persons of the best medical abilities, who, after a strict examination of medical students, or inspection of their college diploma, are authorized to grant them licenses to practice as physician or surgeon: the penalty for the infraction of this act is fifty dollars, to be recovered by a bill of preferment and indictment; one half of which sum is to be given to the faculty, and the other to the informer. It is to be regretted, that this, or some similar regulation, is not enforced at Washington; for the mass of the people of this, as of every other country, are entirely ignorant of those acquirements and experience which a physician ought to possess. The profession is degraded to the great mortification of men of science; and what is infinitely of more importance, many individuals become the sport or victims of ignorance. The laws ought to find a remedy for this evil by enacting, that no person shall establish himself as a physician, without a regular academical, followed by a medical and surgical, education, or at least palpable evidence of eminent knowledge and experience otherwise acquired.
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> "In 1797, it was enacted by the legislature of New York, that no person should practice medicine, unless he produced good evidence that he had already exercised this profession during two years; or had pursued medical studies, for the same time, with a respectable physician or surgeon; and the infraction of this act was punished by a fine of twenty-five dollars. It was afterwards enacted, that no person should be allowed to practice physic or surgery, unless he had studied four years with a regular physician, or was furnished with a diploma of Bachelor or Doctor of Medicine by some College or University: that if he had graduated in any College, he might, after three years of medical studies, be authorized to exercise his profession. These acts, which do honor to the legislature, did not produce the desired effect. Young men, without a regular classical education, bind themselves apprentices to practicing physicians; some of whom, with grave faces, pretend to doubt the advantages of medical, botanical, and chemical lectures; and even express a sort of Mahometan horror against the dissection of a dead body. To evade the act in question, a private contract is made with the teacher, by means of which the student is permitted to practice in his name, at some neighbouring place, for a certain portion of the fees which he receives. How then under these circumstances can he be acquainted with the causes, nature, symptoms, and species of diseases? Even the science of botany, and the study of the qualities of those plants, which nature has provided as remedies for certain disorders, are almost entirely neglected. How strikingly unjust, that a gentleman and scholar, regularly educated as a physician, should be placed on a level with a person who believes in the efficacy of charms, amulets, and superstitions worse than Egyptian.
>
> "The profession of an apothecary ought to be distinct from that of a physician. This would promote the interests and convenience of both, provided the fees were regulated as in France and in Britain. The physician, when called to the country, is paid but a shilling a mile; but he has more profit from the sale of his drugs, which he is obliged to carry in his saddle-bags, where they are frozen in winter and melted in summer, to the great injury of the patient. He is obliged to profit of another circumstance, that of repeating his visits as long as a shadow of indisposition exists. The obstetric art ought not to be, as it generally is, in the hands of old women, unless educated for it, when young, as in France. Infants are mutilated, mothers are injured, sometimes rendered unfruitful, and, in difficult cases, expire, for want of a skilful surgeon. The ravages which quackery exercises over the population are perhaps worse than all the diseases which prevail. Every species of ignorance and superstition is put under contribution to serve her purposes, while she operates by means of the influence acquired over the imagination of the victim. The good sense and integrity of magistrates and ministers of truth ought to be vigorously exerted against the mummery and delusion of words, signs, and charms.

> "In a territory where the wisest legislation has been adopted and sanctioned by public opinion, ignorance, which degrades the moral and destroys the physical man, ought to find no resting-place. The enlightened physicians of Washington ought to create an association for establishing a medical library, and form themselves into a standing committee for foreign correspondence and domestic consultation on medical matters. The fruits of such an institution would be incalculable.[1]"

In his communication, Dr. Woodward speculates on the influence of Mr. Warden's book. "One may easily wonder, although Warden's book was published in Paris, whether it did or did not lead to the gathering of 'the physicians of Washington and Georgetown' who met at Tennison's Hotel, September 24, 1817, 'for the purpose of taking into consideration the organization of a medical society.'" It was on this date that the Medical Society of the District of Columbia came into being.

★

A Medical Decision?

Many physicians have an aversion to what they call politics. When pressed for a definition of the term, they are often as vague as when socialized medicine is mentioned. However, it is clear that they consider politics distasteful for a variety of reasons.

If one accepts the definition of politics as "the science and art of government," nothing is more vital to the country's welfare. That being true, physicians are obligated to take a hand in "politics" especially where medicine is concerned. To do otherwise is to fail in their obligations as citizens.

There are, of course, physicians who are well aware that active interest in "politics" is required of them. But few are of a more practical turn of mind than a member of the Society who is mentioned in a recent article which appeared in *The Saturday Evening Post*—"The Senator from the Five-and-Ten" by Beverly Smith. The subject of this article is the recently elected United States Senator from Maine, Margaret Chase Smith. In a biographical sketch of his subject, Mr. Smith writes:

> "In 1930 she was married to Clyde H. Smith, a man prominent for many years in Maine political life. He was a Republican, but regarded with suspicion by conservatives because of his liberal attitude toward labor and old-age-pension legislation. For a time Mr. and Mrs. Smith spent much of their time in Augusta, the capital of the state, where he was a member of the Governor's Council. Mr. Smith was elected to Congress from the Second District of Maine in 1936, and reëlected in 1938.
>
> "In early April, 1940, a few days before filing time for the primary elections, he was stricken in Washington by a heart attack. He did not realize the seriousness of his condition, and worried about running again for Congress. His physician and personal friend, Dr. Paul F. Dickens, seeking to get this worry off his mind, said, 'Look, Clyde, why don't you have Margaret, your wife and partner, file for the primary? Then if you get better, she can withdraw her name and you can take her place.'
>
> "'Clyde agreed, and seemed greatly relieved,' Doctor Dickens tells me. 'Margaret, surprised and doubtful at first, fell in with my suggestion when I explained my reasons for it.' Mr. Smith suffered another attack and died soon afterward. Mrs. Smith went through with the congressional race and won it. Thus a notable Republican political career grew out of a medical decision by Doctor Dickens, who happens to be a Georgia Democrat."

It would appear that Dr. Dickens, who is well and favorably known to most Washington physicians, is of a more practical turn of mind than most of his fellow practitioners where politics is concerned.

T. W.

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[1] "Respectable and distinguished physicians and surgeons of the United States regret, as we do, that ignorance and quackery prevail against suffering humanity; and we hope that they will find nothing else in these observations than an homage which is due to their talents and patriotism."

THE CARE OF HAND INJURIES*

II. Requirements of Early Definitive Treatment

I. The first-aid treatment of hand injuries is directed fundamentally at protection. It should provide protection from infection, from added injury, and from future disability and deformity. This protection is afforded by noninterference with the wound, cleanliness of surrounding areas, the application of sterile protective dressings, and immobilization in the position of function.

II. The general requirements for proper early definitive care are:

- A. Thorough evaluation of the injury
    - 1. Determination of the time, place, causative agent and mechanism of the injury
    - 2. Determination of the nature and extent of the first treatment given
    - 3. Determination of infection status: whether the wound is relatively clean, grossly contaminated, or with infection established
    - 4. General nature of the wound, i.e., contusion, abrasion, burn, incised wound, lacerated wound, crushing wound, puncture wound, tooth wound, imbedded foreign body, fracture, compound fracture, amputation, or combined injuries
    - 5. Evaluation of structural damage
        - a. Degree and extent of surface injury
        - b. Source of major bleeding
        - c. Evidence of tendon or muscle damage by testing function against resistance
        - d. Evidence of nerve injury elicited by testing for motor and sensory functions
        - e. Bone and joint injury determined by X-ray examination
        - f. Discovery and exact localization by X-ray examination of suspected opaque foreign bodies
- B. Adequate facilities and equipment
    - 1. Each hospital or clinic should have at least one surgeon who is thoroughly familiar with the anatomy and physiology of the hand and who is prepared to undertake the early treatment of its major injuries.
    - 2. Such treatment should be rendered under strictly aseptic conditions, preferably in an operating room, with careful adherence to aseptic technic in the matter of scrubbing, draping, masking, and the use of gloves.
    - 3. An adequate supply of appropriate instruments
    - 4. Sufficient assistance to assure good exposure
    - 5. Good lighting
    - 6. Provision of a bloodless field by means of pneumatic tourniquet or blood pressure cuff
    - 7. Complete anesthesia for the patient, preferably by general anesthetic
- C. Application of appropriate treatment
    - 1. Thorough cleansing of a wide area around the wound with the wound protected (entire hand and forearm). Shaving, soap and water scrub.
    - 2. Thorough cleansing of the immediate wound area, preferably with soap and water or a bland detergent. Antiseptics should not be used in or on the wound.
    - 3. Careful inspection of the wound and assurance of adequate exposure, by additional incision if necessary, closely paralleling natural creases
    - 4. Thorough toilet of the wound, removing, under inspection, all foreign matter. Excision, by sharp and careful dissection, of all completely devitalized or grossly soiled tissue in the wound surfaces. It is essential that the greatest care be exercised to spare all

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* This is the second section of a presentation of the Principles of Early Management of Hand Injuries prepared for the Committee on Fractures and Other Traumas of the American College of Surgeons by the American Society for Surgery of the Hand. The first section, on General Principles of Protection, appeared in the July issue of the Annals.

tissues that may be viable, particularly skin, tendon, nerve and bone fragments.

5. Assurance of hemostasis by ligation of major injured vessels
6. Repair of injured nerves by end-to-end union with fine interrupted perineural sutures. The uniting of divided digital nerves is important to future function.
7. Repair of other soft tissue injuries, where appropriate, i.e., in clean wounds of short duration, in well-cleaned contaminated wounds of not over 8 hours' duration, never in wounds with established infection.
8. Reduction of fractures and dislocations, and retention in corrected position by traction or splinting in the position of function (position of grasp with wrist in dorsiflexion)
9. Application of protective dressing, fingers separated by gauze and hand immobilized to such extent as may be necessary to permit healing, in the position of function (never in the flat position)
10. Administration of antibiotics and protective antitoxin as indicated

D. After-treatment

1. Elevation and rest of the hand
2. Noninterference with initial dressing for a sufficient time to permit healing, unless evidences of suppuration develop
3. Restoration of skin coverage of denuded areas at the earliest possible time. Partial thickness skin grafting is a simple and valuable means of promoting early healing.
4. Early restoration of function for nonaffected parts of the hand by directed active motion to the fullest extent that will not jeopardize healing of repaired structures
5. Restoration of function in affected parts of the hand by directed active motion as early as is consistent with full healing and preservation of the repair of damaged structures.

Subsequent articles will deal with the particular treatment of special types of injuries.

WOMAN'S AUXILIARY NOTES

Mrs. Edgar E. Quayle, President of the Woman's Auxiliary to the Medical Society of the District of Columbia, presided at the first meeting of the season, October 13, in the Medical Society's library.

A very attractive program was planned for the occasion. Following the business meeting an outstanding interior decorator, Mr. John Jay Greer, spoke on "Antiques Used in Conjunction with Contemporary Decoration." Mr. Greer's lecture was followed by an elaborate luncheon-bridge. Mrs. William P. Herbst and Mrs. Robert E. Moran, both past presidents of the Auxiliary, presided at the luncheon table.

The Auxiliary voted a large donation to the Community Chest.

The following were elected as new members: Mmes. Horace H. Custis, E. Raymond Fenton, William A. Howard, A. Fife Heath, Robert B. Havell, James A. Gannon, Jr., Richard E. Kelso, Philip J. Lowenthal, Paul Kiernan, Earl H. Mitchell, John M. Orem, Leonard T. Peterson, Alec A. Preece, Floyd S. Rogers, Julius J. Radice, W. Calhoun Stirling, John J. Sweeney, Ashby W. Smith, Joseph H. Watson, Charles D. Scheuch, George M. Wyatt and Uthai Vincent Wilcox.

Mrs. Marcel J. Foret
Publicity Chairman

MEETINGS

Wednesday, December 8

The following program will be presented:

"Meningococci Infection," Worth B. Daniels, M.D.

"Treatment of Nonmeningococcic Purulent Meningitis," Lewis K. Sweet, M.D.

"Peritonitis," Crenshaw D. Briggs, M.D.

Wednesday, December 15

Symposium on Peptic Ulcer

"Surgery of Gastric Ulcer," Paul Kiernan, M.D.

"Medical Management of Peptic Ulcer," Matthew White Perry, M.D.

"Vagus Resection of Peptic Ulcer," William Merchant, M.D., Mt. Alto Veterans Hospital.

"Complications of Peptic Ulcer." Speaker to be announced.

THE USE OF STREPTOMYCIN IN TUBERCULOSIS*

INDICATIONS FOR TREATMENT

Nearly all forms of tuberculosis respond to treatment with streptomycin in some degree. However, the drug should by no means be used indiscriminately.

Pulmonary Tuberculosis.—It is extremely difficult to lay down hard and fast rules for the use of streptomycin in pulmonary tuberculosis. Especial care in the selection of cases is necessary. The drug has its greatest usefulness in cases with an appreciable amount of exudative disease. In some other cases streptomycin is responsible for symptomatic improvement and the prevention of complications.

1. Definitive treatment. This category includes chiefly progressive lesions of recent origin with little or no destruction of tissue, such as progressive primary tuberculosis and tuberculosis due to hematogenic and bronchiogenic dissemination.
2. Preparation for surgical procedures, including temporary and permanent collapse and excisional surgery. In some cases pneumothorax can be instituted sooner and with greater safety after a course of streptomycin. Not infrequently the drug is of great value in preparing patients as candidates for thoracoplasty. As prophylaxis, streptomycin should be used routinely in excisional procedures.

It must be emphasized again and again that streptomycin is not a substitute for sanatorium care and other proven procedures. Rather it is a valuable adjunct to these other measures.

Extrapulmonary Tuberculosis.—Streptomycin is the only treatment available in miliary tuberculosis and tuberculous meningitis. In such cases early and intensive treatment is imperative. Streptomycin is the treatment of choice for tuberculous sinuses, tuberculosis of the oropharynx, larynx and tracheobronchial tree, tuberculous enteritis and peritonitis, tuberculous otitis media, and tuberculous pericarditis. In renal tuberculosis, symptomatic improvement is usually prolonged and bacterial conversion occurs in some cases. Tuberculosis of the bones and joints is often improved by streptomycin, but chemotherapy is not a substitute for orthopedic surgery when this is indicated.

Streptomycin is valuable as preoperative and postoperative treatment of tuberculosis in surgery of the genitourinary tract, surgery of bones and joints, pericardiolysis, incision and drainage of abscesses, and fistulectomy.

ADMINISTRATION

Streptomycin is administered by intramuscular or deep subcutaneous injection. The optimal regimen for the administration of streptomycin has not been determined. In most forms of tuberculosis results appear to be satisfactory when a dose of 0.5 to 1 gram a day are administered in 1 or 2 injections for 6 to 8 weeks. With this mode of therapy complications are very infrequent and in most cases their clinical importance may be discounted. In tuberculous meningitis and miliary tuberculosis treatment should be vigorous, a dose as high as 2 grams per day for 4 months, or longer if necessary. In tuberculous meningitis results seemingly are better when intramuscular injection is supplemented by intrathecal injection of from 25 to 50 milligrams every 24 to 48 hours for 2 or 3 months, or as long as this method of administration is tolerated by the patient.

Since drug fastness is apparently closely related to duration of treatment, regardless of the daily dosage, limitation of the period to a few weeks may be effective in avoiding this phenomenon in many cases.

The physician handling a case of tuberculosis would do well to ask himself the following questions before administering streptomycin:

1. Why is streptomycin being used: for definitive therapy, as preparation for surgery, for prophylaxis, or for relief of distressing symptoms?
2. Is the type of lesion present of such a nature as to warrant the use of streptomycin in addition to other available therapy?
3. Can the purpose of chemotherapy be accomplished within the relatively short period of the drug's effectiveness? (Almost three fourths of the patients show resistant organisms after 3 to 4 months of continuous daily streptomycin treatment.)

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* This report submitted by the Subcommittee on Chemotherapy and Antibiotics of the American College of Chest Physicians was prepared for the Committee on the Management and Treatment of Diseases of the Chest and was released to medical journals, September 23, 1948. The Chairman of the Committee stated that this condensed report represents the combined experiences of the various groups in this country who are doing investigational work on this subject, including representatives of the Veterans Administration, the U. S. Army Hospitals, and several of the outstanding medical centers.

OTHER CHEMICAL AND ANTIBIOTIC SUBSTANCES

There is no other substance known today which compares with streptomycin in its effectiveness against tuberculosis. The sulfones, promin and promizole, are generally ineffective alone. Experimental work is in process to determine whether or not there is synergistic action when any of these are added to streptomycin. Para-aminosalicylic acid is promising on the basis of laboratory experimentation, but sufficient clinical work has not yet been done to permit evaluation of this drug. Subtilin has not had sufficient clinical trial and there is not yet enough animal experimentation to indicate its usefulness. Of the many other antibiotic substances, none has shown in preliminary experimentation indication of real value against tuberculosis and none has had clinical trial.

THE RESPONSIBILITY OF THE PRACTICING PHYSICIAN FOR DIABETES DETECTION

The discovery and treatment of diabetes mellitus at an early stage demand the attention of all practicing physicians. Failure to discover and treat diabetes early results in preventable disabilities and impairments of health. In the Diabetes Exhibit at the Annual Meeting of the American Medical Association held in Chicago in June, 1948, it was shown that the mortality rate for diabetics first seen when a complication had occurred was three times the rate for diabetics first seen earlier and before impairments had developed. Actually the future for the diabetic patient under modern medical treatment is brighter and more hopeful today than ever before.

In 1929, Dr. George H. Bigelow and Dr. Herbert Lombard began a study of chronic disease in Massachusetts which led to the publication of statistics showing that the number of diabetic patients in Massachusetts was far higher than had been heretofore thought. In 1935, a National Health Survey was conducted which confirmed these figures. In Oxford, Mass., results of a survey by the United States Public Health Service indicates that at least a million undiagnosed diabetics exist in the United States and Canada.

District and state medical societies now have the opportunity to take the lead in the fight against diabetes in response to an appeal to the practicing physicians of the United States, presently being made by the Committee on Diabetes Detection of the American Diabetes Association. This committee was appointed by Dr. Charles H. Best, President, at the Annual Meeting in June, 1948. Plans are being formulated for National Diabetes Week, December 6 to 12, 1948.

As a first step in a full-scale attack on diabetes, eighth among the leading causes of death, a medical society should appoint its committee on diabetes. The National Committee on Diabetes Detection stands ready to assist local committees in their work.

The committees on postgraduate instruction should plan instruction and demonstrations in diabetes this fall. Also, hospital staff meetings should provide a place on their program for diabetes. Committees on public relations and public information should plan meetings for instruction of laymen, including patients, their families, and all others interested.

Women too have an important role to play in the fight to control diabetes. It is significant that among women, diabetes is more frequent than among men. It is desirable to enlist the aid of women's organizations, especially the women's auxiliaries of the medical societies, as an adjunct to the program planned by medical societies.

Already a number of local diabetes associations affiliated with the American Diabetes Association have been formed. More such associations composed of physicians are needed. With the coöperation of the physicians within their area these associations have accepted the challenge and will strive to find and treat the million hidden diabetics. Associations will be assisted by the American Diabetes Association in attaining such objectives as more graduate courses in diabetes for physicians, providing better laboratory services, and helping with instruction for patients. Now is the time for action—will the practicing physician seize this opportunity for progress in an all-important field or will he prefer to surrender to others his responsibility for diabetes detection and treatment?

HOWARD F. ROOT, M.D.
Chairman, National
Committee on Diabetes Detection

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AMERICAN MEDICAL WRITERS' ASSOCIATION

At the Fifth Annual Meeting of the Mississippi Valley Medical Editors' Association held at Springfield, Ill., September 29, during the Mississippi Valley Medical Society Meeting, radical changes were voted in the Association's constitution, including the adoption of a new organization name, the American Medical Writers' Association. The new name more clearly expresses the purpose and scope of the organization, i.e., "(a) to bring into one organization all physicians interested in medical journalism or medical writing, and all laymen who are connected with the editorial or business staff of medical periodicals, libraries, foundations, or publishing companies; (b) to help improve medical literature; (c) to secure interchange of views of the members so that they may attain such intelligent unity and harmony in every phase of their labor as will elevate and make effective the opinions of the medical profession in their respective communities."

The removal of the word "Editors" broadens the Association's scope for there are thousands of medical men interested in medical writing but only a few hundred who are medical editors. Elimination of the words "Mississippi Valley" removes any geographic implication. Holding the meetings, at least for the next few years, in the Middle West, near the center of population of the United States, should make attendance more convenient for the largest number of people. A larger attendance can be assured and better talent obtained by holding the meetings in connection with a large medical society with a program appealing to physicians in general practice, hence the tie-up with the Mississippi Valley Medical Society which has not held sessions while this organization was holding its meeting.

The new organization has eliminated "associate" memberships, as all members henceforth will be "active members," regardless whether he or she is a graduate in medicine. Nonmedical members, however, must be college graduates and be sponsored by an active physician-member of the Association.

The *Mississippi Valley Medical Journal* (Quincy, Ill.) will serve as the official publication of the Association. The *Journal* has been the unofficial publication of the previous organization since its inception in 1940. Since the American Medical Writers' Association plans to hold its meetings at the same time and place as the Mississippi Valley Medical Society and since the *Mississippi Valley Medical Journal* has served as the official publication of the latter Society since 1936, it was logical that the *Journal* should also represent the Writers' Association. Dr. Harold Swanberg of Quincy, Ill., Secretary of the Mississippi Valley Medical Society since its organization in 1935, and Secretary of the American Medical Writers' Association, is the Editor.

The Sixth Annual Meeting of the Association will be held at the Jefferson Hotel, St. Louis, September 28, 1949, and a splendid meeting, including a course in medical writing and presentation of medical papers, is being planned. The Association is desirous of extending its influence through a larger membership, believing there is a great need for one organization in this country devoted to the improvement of the written word of medicine. A membership booklet will be published in February. All interested in medical writing are cordially invited to join. Membership application blanks may be secured from Dr. Harold Swanberg, Secretary, 209–224 W.C.U. Bldg., Quincy, Illinois.

GROUP HOSPITALIZATION INCREASES RATES AND BENEFITS

The rising costs of hospital service have made it necessary for Group Hospitalization, Inc. to increase the subscription charges for all hospital service contracts, effective December 1, 1948. In making this announcement, Mr. Joseph H. Himes, President of GHI, called attention to the higher wages, higher prices for food, linen, and other every-day commodities which face hospitals today, as well as the added cost of new and expensive drugs, modern methods of treatment, and essential scientific equipment and supplies.

Under the new schedule, monthly rates for individual contracts will be raised from 65 cents a month to $1.10; for husband and wife, from $1.50 to $2.50; and for family contracts, from $1.75 to $2.75.

In return the new service contract will provide 30 days' hospitalization instead of the 21 days now allowed, along with these additional benefits:

1. Discounts on rates for semiprivate rooms beyond the 30-day limit will be increased from 10 per cent to 50 per cent up to an additional 180 days in participating hospitals, and restrictions have been lifted on the number of hospital admissions during the contract year.

2. Payment of $15 for the first day and $6.50 a day thereafter up to 30 days for subscribers hospitalized in out-of-town hospitals, now receiving only $5 daily.

3. Hospitalization up to 10 days during any contract year for pulmonary tuberculosis, poliomyelitis, mental or nervous disorders, alcoholism, drug addiction and quarantinable diseases.

4. Payment for oxygen therapy and all sera (except blood and blood plasma) including intravenous solutions and injections.

5. An allowance up to $10 for emergency hospital care, within 24 hours after accident, when subscriber is not required to become a bed patient.

Maternity care will be limited to 8 days' care for each admission, during which use of the labor room, delivery room, and additional benefits are available to the mother, as well as nursery care for the baby. The old contract was not limited to 8 days. The new contract is in accordance with present hospital practice in this area where the average obstetrical case requires less than 8 days of hospitalization.

GHI, one of 92 nonprofit community hospital service plans serving more than 32 million persons in the United States, Canada and Puerto Rico, has not raised its rates since 1937, when the present schedule was established. The increase in rates is needed, President Himes pointed out, to meet rising costs and to protect the organization's reserve fund.

MEMBERSHIP

The following applicants for membership will be voted on at the meeting of the Executive Board, December 20, 1948:

For Active Membership

Ernest Henry Aschenbach, Georgetown University—1934
Joseph Augustine Bailey, Georgetown University—1944
Robert Henry Barter, University of Wisconsin—1940
Lucian Bauman, University of Illinois—1943
Edward James Beattie, Jr., Harvard University—1943
Stanley L. Blumenthal, Johns Hopkins University—1943
Frederick Bertram Brandt, University of Maryland—1943
Robert L. Brickhouse, Washington University (St. Louis)—1942
Warren Daniel Brill, University of Maryland—1944
Pete Commings, Medical College of Virginia—1941
Robert Ralph Cross, Georgetown University—1942
Edward Robert duPrey, Jefferson Medical College—1945
John McCallum Evans, University of Buffalo—1939
Joseph Francis Fazekas, Albany Medical College—1944
Walter R. Gladding, Medical College of Virginia—1928
Eugene S. Gladsden, Jefferson Medical College—1938
Winston Conwell Hall, University of Michigan—1942
Thomas Lees Hartman, Johns Hopkins University—1943
Paul Heller, University of Prague—1938
William Kurstin, Goerge Washington University—1943
Manuel P. Landman, George Washington University—1941
David Leibovici, University of Paris—1934
Gordon R. MacDonald, George Washington University—1943
Kenneth Lowell McCoy, Temple University—1942
Arthur Allen Morris, Jr., Duke University—1943
Francis James Murray, Cornell University—1940
Douglas T. Noble, University of Toronto—1927
Ben Caswell Ogle, Columbia University—1943
Morris F. Oxman, Temple University—1935
Russel Smith Page, Jr., University of Vermont—1940
Richard E. Palmer, George Washington University—1944
Jean E. Paquin, George Washington University—1942
Henry Rappaport, University of Vienna—1937
Belden R. Reap, Georgetown University—1947
Jack J. Rheingold, University of Cincinnati—1940
Arch S. Russell, Jr., Northwestern University—1940
James Henry Scully, Georgetown University—1943
Matthew A. Stroup, George Washington University—1945
Hewitt Irving Varney, University of Vermont—1935
James Willard Walker, Georgetown University—1943
William Bertalan Walsh, Georgetown University—1943
Robert O. Warthen, George Washington University—1944
Marcus Allen Weiner, University of Michigan—1935
Mary Julian White, Columbia University—1934
Charles Samuel Wise, New York University—1939
John Milton Wyman III, Georgetown University—1947

For Associate Membership

Charles V. Amole, University of Virginia—1933
William Brainin, George Washington University—1934
Leslie Alan Falk, Johns Hopkins University—1942
Carson Lee Fifer, University of Virginia—1928
Alex Louis Finkle, University of California—1946
Harold F. Funsch, St. Louis University—1938
Clifton Keck Himmelsbach, University of Virginia—1931
George P. Lemeshewsky, George Washington University—1934
Archibald R. MacPherson, George Washington University—1942
Wallace N. Mook, College of Medical Evangelists—1936
George Sharpe, University of Illinois—1941
Stephen J. Sheehy, Jr., Georgetown University—1947
Thomas E. Stone, George Washington University—1945
Merton Louis White, Georgetown University—1945
Alvin Charles Wyman, New York University—1943

Washington Physicians of Yesterday

XLI. HARRY CRECY YARROW, M.D.

His hobby was snakes; and the scientific eminence which Dr. Harry Crecy Yarrow attained as an authority on herpetology and other branches of natural history gave him an avocational distinction among the past physicians of Washington.

Born November 19, 1840, in Philadelphia, educated in Philadelphia and Switzerland, Dr. Yarrow received the degree of M.D. from the University of Pennsylvania in 1861. After 1866 he was a resident of Washington, D.C.

From the time of his graduation in 1861 he was largely engaged over a period of 32 years in the medical service of the United States Army. He was Assistant Surgeon of the 5th Pennsylvania Cavalry to January, 1862. As Acting Assistant Surgeon after that he was the executive officer of a military hospital in Philadelphia to 1865; served with troops in Georgia during a cholera epidemic in 1866, and had similar service in 1867 in New York Harbor; in 1876 was on duty at the Philadelphia Exposition; 1877–88 on duty at the Army Medical Museum and Library and the Soldiers' Home Hospital in Washington; and 1888–93 served at the Army Dispensary in Washington.

He was connected with the United States National Museum 1872–80, and from 1872 to 1876 he was surgeon and naturalist in Government exploring expeditions west of the 100th meridian. In the latter capacity he was author and co-author of numerous scientific reports on the findings of these expeditions. At one time he was Curator of the Department of Reptiles in the National Museum.

From 1893 until his death he engaged in the practice of medicine in Washington, specializing in dermatology. He was Lecturer and Professor of Dermatology in the George Washington University Medical School 1883–1929, Consulting Surgeon to several hospitals, and President of the Medical Staff of Garfield Hospital 1907–26. He joined the

(*Continued on page 654*)

News and Personals

The New York State Society of Anesthesiologists is holding its Third Postgraduate Assembly in New York City, December 9 and 10, at the Hotel New Yorker. **Dr. Edward B. Tuohy,** Professor of Anesthesiology of Georgetown University School of Medicine, will be guest chairman of a panel discussion on spinal anesthesia.

The Eastern Section of the American Federation for Clinical Research will hold its annual meeting in Philadelphia on Saturday, December 4, at the Temple University School of Medicine.

Professor Georges Portmann of the University of Bordeaux, France, will again conduct an intensive graduate course in otorhinolaryngology, esophagoscopy, and bronchoscopy at Georgetown University Medical Center for two weeks, beginning April 18, 1949. Further information may be secured from Dr. James A. Flynn, 1511 Rhode Island Avenue, Washington, D. C.

The Montgomery County Medical Society has invited Dr. Frank Foster, of the Lahey Clinic, Boston, to be its guest speaker, December 21. His subject will be "Diseases of the Thyroid Gland." Discussants will be Drs. Roy Hertz and R. Bretney Miller. The meeting will be held at the Manor Country Club, Norbeck, Md., preceded by dinner at 7:15 p.m.

The ANNALS office has received from the Public Health Service of the Federal Security Agency a copy of the new publication, **"Morbidity Reporting Requirements, including Report Forms and Instructions of the Public Health Service as of July 1, 1948."** These new reporting requirements represent an effort by the Public Health Service to bring about uniformity and simplification of its morbidity reporting requisites. Any reader who might like to familiarize himself with this material may obtain one of the limited copies available for free distribution. Requests should be addressed to the Federal Security Agency, Public Health Service, Division of Public Health Methods, Washington 25, D. C.

An annual review of medical progress, to be known as **Medicine of the Year,** is being offered to members of state medical societies at a very nominal fee. The review will be a descriptive and analytical account of progress in medical science and practice during the preceding year, presented in a practical, useful, and informative manner, particularly as it relates to the everyday practice of general medicine and the specialties.

The editorial management is under the direction of Dr. John B. Youmans, Dean, College of Medicine, University of Illinois. The principal contributors will be the following medical educators and writers: Dr. Hugh J. Morgan, Professor of Medicine, Vanderbilt University, Nashville, Tenn.; Dr. Frank Whitacre, Professor of Obstetrics and Gynecology, Memphis, Tenn.; Dr. Henry G. Poncher, Professor of Pediatrics, University of Illinois, Chicago; and Dr. Warren H. Cole, Professor of Surgery, University of Illinois, Chicago.

The subscription price is $1.50 a year; checks should be sent to *Medicine of the Year*, 1853 West Polk Street, Chicago 12, Ill. The first issue is scheduled to appear early in 1949. If an insufficient number of subscriptions are received to warrant publication, the money will be refunded.

Cancer detection clinics in Washington will solicit contributions of $15 instead of $10 in the future. The Medical Society's Committee on Cancer Control approved this increase because of the rising costs of operation at the clinics and the growing demands upon the local unit of the American Cancer Society for financial support for educational, research and service projects. The latter include the diagnosis and treatment of medically indigent cancer sufferers, services of the Instructive Visiting Nurse Society, and care of terminal cases at the Washington Home for Incurables. The clinics have been operating at a deficit despite long waiting lists of patients.

Clinics which will benefit by increased contributions are those at Garfield, Doctors, George Washington University and Georgetown University Hospitals. The cancer detection clinic at Gallinger Municipal Hospital, where medically indigent persons who are residents of the District may receive examination without making a contribution, is not affected by the new ruling.

The United States Civil Service Commission announces examinations for **medical officer positions** in Washington, D. C., throughout the United States, and in the Panama Canal Zone, at salaries ranging from $4,479 to $6,235 a year. No written test is required to qualify for the positions. Applicants must be graduates of a medical school and must be currently licensed to practice medicine and surgery. Some positions require completion of a full internship, either general rotating or in a specialty, and still other positions require professional medical experience. Maximum age limits range from 45 to 62 years with certain age limits waived for veterans. Information and application forms may be secured from the U. S. Civil Service Commission, Washington 25, D. C.

Howard University School of Medicine will supply 25 per cent of interns and students to practice at **Gallinger Municipal Hospital** beginning July 1949. Under a new contract signed, October 5, by the Rev. Lawrence C. Gorman, S. J., President of Georgetown University, Dr. Cloyd Heck Marvin, President of George Washington University, and Dr. Mordecai Johnson, President of Howard University, each of the three medical schools will furnish up to 25 per cent of the interns as well as a number of attending physicians. The remaining 25 per cent will be selected from applicants from other medical schools throughout the country.

Treatment by colored medical personnel will not begin until July 1, 1949.

Dr. Paul B. Cornely, Medical Director of Freedmen's Hospital, has been appointed to membership on the Executive Committee of Gallinger Hospital, which will coördinate the activities of Howard, George Washington and Georgetown Medical Schools at Gallinger. The members include Dr. Alvin R. Sweeney, Superintendent of Gallinger; Dr. Daniel L. Seckinger, Deputy Health Officer; Dr. P. S. Rossiter, Chief of Staff at Gallinger; Drs. Harold Jeghers and Charles F. Geschickter of Georgetown; and Drs. Blaine Harrell and John L. Parks of George Washington.

CALENDAR OF MEETINGS

October 1	Medical Bureau Committee Executive Committee of Washington Diabetes Association
October 2	Washington School of Psychiatry
October 4	Grievance Committee Graduate Nurses' Association
October 5	Committee on Industrial Medicine
October 6	Medical Advisory Committee of Red Cross Blood Bank
October 7	Section on Neurology Executive Board of Woman's Auxiliary
October 11	Washington Orthopedic Club
October 12	House Committee District Dental Society Registered X-ray Technicians of Washington
October 13	Scientific Meeting of Society Woman's Auxiliary District Division of American Cancer Society
October 14	Committee for Health and Research
October 15	Medical Advisors to Selective Service Director of the District of Columbia Cancer Control Committee Washington Diabetes Association
October 16	Washington Psychoanalytic Society Washington Diabetes Association
October 19	D. C. Medical Technicians
October 20	Chairmen of Committees Section on Pathology and Laboratory Medicine
October 21	Section on Neurology and Psychiatry Section on Radiology
October 22	Cancer Control Committee Classification Committee
October 25	Committee on Medical Care in Public Institutions
October 26	Section on General Practice
October 27	Scientific Meeting of Society
October 28	Section on Radiology D. C. Rheumatism Society
October 29	Section on Neurology and Psychiatry

Dr. W. Warren Sager has been appointed **Medical Advisor** and **Theodore Wiprud, Associate Medical Advisor, to the Selective Service Director** for the District of Columbia, Mr. William E. Leahy. Mr. Leahy, with the approval of the District Commissioners, selected medical advisors to serve on the fifteen Washington draft boards. They are as follows:

No. 1. Drs. W. K. Billingsley, Jr., and Lester M. Archambeau
No. 2. Drs. Charles P. Ryland and Stewart J. Johnson
No. 3. Drs. Thomas C. Thompson and Isaah B. Horn
No. 4. Drs. Richard E. Dunkley and T. Edward Jones
No. 5. Drs. Herbert S. Gates and Cervera R. Little
No. 6. Drs. Alan F. Kreglow and Hamilton Martin
No. 7. Drs. E. E. Quayle and William F. Nelson
No. 8. Drs. Howard L. Smith and Theodore R. Pinckney
No. 9. Drs. Samuel Zola and Ogbon N. Simmons
No. 10. Drs. John C. Reisinger and Herbert L. Stevens
No. 11. Drs. James A. O'Keeffe and Charles F. Adams
No. 12. Drs. Luther H. Snyder and G. Frazier Miller
No. 13. Drs. Maurice van Kinsbergen and Edward S. Jones
No. 14. Drs. Walter Atkinson and Frank A. Turner
No. 15. Drs. Gerald H. McAteer and James E. Roberts

These physicians gathered in the Medical Society's library, October 15, where they were administered the required Oath of Office and instructed in the procedure contemplated under current operations.

Nominated to membership on the Appeal Board were **Dr. Samuel Dessoff,** to Panel No. 2, and **Dr. Herbert E. Martyn,** to Panel No. 4.

An advisory committee to the U. S. Children's Bureau on Federal-state programs for maternal and child health and crippled children's services was organized in Washington during September. The new committee will advise the Bureau on matters of public policy affecting the promotion of better health for mothers and children. Dr. Harry H. Gordon, Professor of Pediatrics, University of Colorado Medical Center, was elected chairman of the Committee. Members include officially designated representatives of medical, nursing, hospital, dental, medical social work, physiotherapy, and dietetic associations; representatives of voluntary health agencies; the leaders in labor, farm, women's and veterans' groups; specialists from graduate schools in medicine and allied sciences; and other distinguished citizens.

Among the committee members elected for a three-year term was **Dr. Harry A. Ong,** of Washington, who will represent the American Academy of Pediatrics. Representing the American Medical Association on the committee will be Dr. W. W. Bauer, Director of the Bureau of Health Education, and Dr. James R. Miller, a member of the Board of Trustees of the AMA.

Sixty-five golf enthusiasts gathered for the **Eighth Annual Physicians' Golf Tournament** at the Kenwood Golf and Country Club, October 6. Prizes were awarded the winners at the dinner which followed the golf tournament. The scores were as follows:

1st low gross, William J. Evans, 77; 2nd low gross, Clayton Hawfield, 82; 3rd low gross, E. R. Lawson, L. D. Berman and John W. Nesbitt, 84; 4th low gross, Paul Zehfuss, 86; 5th low gross, Frank A. Zack, 88; 6th low gross, James Dusbabek, 89; 7th low gross, Preston Haynes and Robert Coffey, 90.

1st low net, Frank Hand, 65; 2nd low net, C. R. Naples, 67; 3rd low net, T. J. Pekin, John Schwarzmann and Robert U. Cooper, 70; 4th low net, Vincent J. Hungerford, 71; 5th low net, Alvin I. Kay and Russel J. Jansen, 72; 6th low net, Richard T. Sullivan, P. J. Mullins and Walter Gerwig, 73; 7th low net, James Hawfield, V. J. DiFrancesco, Gordon R. MacDonald and Julius J. Radice, 74.

Prizes for the tournament were donated by the following firms:

Ayerst, McKenna & Harrison, Brenner Photo Company, Breon & Company, Camel Cigarettes, Corwin's Pharmacy, Doak Company, Franklin & Strunk, Gibson Company, Kloman's Instrument Company, Ray Koontz, Lee Funeral Service, Maxwell & Tennyson, Peoples Drug Stores, Roane's Pharmacy, Service Pharmacy, Tirella, Inc., Tschiffely Brothers, Whitman Company, and Williams Drug Store.

Members of the Society's Sports Committee, who made arrangements for the tournament, were Dr. Norvell Belt, Chairman; Drs. Russel J. Jansen, Roy F. Dunmire, Richard J. McNulty, John W. Nesbitt, William R. Perkins, Jr., Barton W. Richwine and Sherman A. Thomas.

The George Washington University School of Medicine held its 125th opening assembly, September 20. Dr. Leonard A. Scheele, Surgeon General of the U.S. Public Health Service, gave the principal address on "The Medical School and National Health." Presiding was Dean Walter A. Bloedorn of the School of Medicine.

Following the assembly, Dr. Bloedorn was host to the faculty and guests at a luncheon at the Carlton Hotel.

The Washington School of Psychiatry held graduation ceremonies at the Mayflower Hotel, October 9, for eight psychiatrists in the Washington-Baltimore area. Those who received diplomas were Drs. Rex E. Buxton, Robert A. Cohen, Alexander Halperin, Stanley L. Olinick, Olive Cushing Smith, Herbert Stavern, Philip S. Wagner and Mabel G. Wilkin. The Board of Trustees of the William Alanson White Psychiatric Foundation, sponsor of the Washington School of Psychiatry, and the Board of Directors and faculty of the School attended the ceremonies. Drs. Frieda Fromm-Reichmann, David McK. Rioch, Harry Stack Sullivan and Edith V. Weigert spoke briefly of the work of the School.

The Washington School of Psychiatry, which is now in its 13th year, is engaged in various research projects and offers advanced courses in psychiatry and the social sciences to approximately 400 students, including 160 doctors of medicine.

The Albert and Mary Lasker Foundation Awards for 1948 have been announced by Dr. George Baehr, President of the New York Academy of Medicine and Chairman of the Awards Committee. The Department of Medicine and Surgery of the Veterans Administration won the Group Award in the fields of scientific and medical research. Dr. Paul R. Hawley, former Chief Medical Director, and Dr. Paul B. Magnuson, his successor, were cited "in recognition of the efficient program developed by them to provide modern medical care for the millions of veterans who helped in the defense of America during World War II."

Dr. Martha M. Eliot, Associate Chief of the Children's Bureau, and Dr. Rolla E. Dyer, Director of the National Institute of Health at Bethesda, were among the individual winners. They will receive $1,000 each and a gold replica of the statue, the Winged Victory of Samothrace.

Formal presentations were made, November 11, in Boston, during the annual meeting of the American Public Health Association.

The 1948 Annual Meeting of the American Society of Anesthesiologists was held in St. Louis, November 3–6, at the Hotel Statler. At a meeting of anesthesiology department heads, sponsored by the Committee on Medical Schools and Postgraduate Education, November 3, **Dr. Lloyd H. Mousel,** of Washington, First Vice President of the Society, discussed the resident training program from the standpoint of the medical school hospital. **Dr. Edward B. Tuohy** presented a paper on "Surgeon-Patient-Anesthetist Relationship," November 6, during a Symposium on the Practice of Anesthesiology.

The Medical Society of Virginia held its annual meeting in Richmond, October 18, 19 and 20. Three Washington physicians participated in the program. **Dr. Charles Stanley White** spoke on "Protein Deficiency in Surgical Practice." "The Use of the Antihistamine Drugs in Dermatology" was presented by **Drs. Edwin E. Barksdale and George Ellis.**

During the next few months the **Jewish Community Center of Washington** is presenting at the Center a **Marriage Clinic lecture series** in which members of the Medical Society of the District of Columbia are participating. "An Introduction to Problems of the Marital Relationship" will be presented by **Dr. Walter Stokes,** January 26. On February 15 he will speak on "Preparation for Marriage and Marriage Counseling." **Dr. Ivy Pelzman** will discuss "Sexual Behavior in Men," March 30. "Sexual Behavior in Women" will be presented by **Dr. Esther Nathanson,** April 27.

George Washington University School of Medicine received a gift of $1,000 for its endowment fund from the George Washington University Alumni Club of Puerto Rico, which has a membership of 38 physicians. The check was presented to Dr. Walter A. Bloedorn, Dean of the School of Medicine, October 5, by Dr. Ricardo F. Fernandez, President of the Alumni Club. Dr. J. E. Colon, Vice President, and Dr. Raymond Mejia, Treasurer of the Alumni Club, accompanied Dr. Fernandez to Washington to make the presentation. Dr. Fernandez, an ophthalmologist in San Juan, received his medical degree at George Washington in 1931; Dr. Mejia, a surgeon in Humacao, graduated in 1932, and Dr. Colon, a urologist in San Juan, in 1927. Two Puerto Rican students are now enrolled as sophomores in the School of Medicine.

In accepting the check, Dr. Bloedorn revealed that plans are under way for building a new $1,000,000 medical school building to be located near the new Hospital on Washington Circle. Under an arrangement with the Federal Government, the present medical school building at 1335 H Street, N.W., must be turned over to the Federal Government as an offset to the Government contributions toward the Hospital within five years from the hospital's opening date, which was April 1, 1948.

Dr. Bloedorn stated that checks from the school's alumni have been coming in steadily although no drive for funds has yet been made. He mentioned a recent donation of $5,000 made by **Dr. Charles Stanley White,** former Professor of Surgery and now a member of the University's Board of Trustees.

The Washington Orthopedic Club resumed its monthly meetings, October 11, with a meeting in the Medical Society's Building. Dr. Andrew G. Prandoni, Consultant in Vascular Diseases for the Veterans Administration at Walter Reed General Hospital, presented some orthopedic aspects of peripheral vascular disease. Dr. Samuel J. Sugar was elected to Associate membership in the Society.

The Rheumatism Society of the District of Columbia held its first meeting of the season, October 28, in the Medical Society's library. Dr. Charles Wainwright, of Johns Hopkins University, was the guest speaker; his subject, "Rheumatoid Arthritis."

Dr. Henry L. Darner was host at the first meeting of the **Clinico-Pathological Society,** October 19, at the Kennedy-Warren Apartments. Dr. Arch L. Riddick presented a paper on "Differential Diagnosis of the Right Lower Abdominal Quadrant." The following officers were elected:

Dr. Daniel B. Moffett, *President*; Dr. Charles P. Howze, *First Vice President*; Dr. Bernard L. Hardin, *Second Vice President*; Dr. Thomas Bradley, *Secretary-Treasurer*.

The Metropolitan Washington Tuberculosis Conference for 1948 convened at Glenn Dale Sanatorium, October 28. Dr. Brian B. Blades, Professor of Surgery of George Washington University School of Medicine, addressed the Medical Section on "Observations on the Surgical Treatment of Asthma." Other Medical Society members who participated in the program were Drs. Charles P. Cake, Alvin R. Sweeney, V. L. Ellicott, Daniel L. Finucane and A. Barklie Coulter.

Dr. Custis Lee Hall, Clinical Professor of Surgery of George Washington University, was elected President of the Ambulatory Fracture Association during its ninth annual meeting at the Mayflower Hotel, October 4–6. Dr. Hall is Chief of Orthopedics at Doctors Hospital and Consultant in Orthopedics at St. Elizabeths Hospital.

Dr. Hall and **Dr. Leonard T. Peterson** participated in the scientific program during the meeting. Dr. Hall was moderator at a round table discussion on fracture problems; Dr. Peterson spoke on the topic, "Precautions—Skeletal Fixation."

Dr. Thomas Parran, former Surgeon General of the U.S. Public Health Service, was appointed Dean of a new graduate school of public health at the University of Pittsburgh. The graduate school will emphasize occupational and industrial health and hygiene and will do basic research in all phases of public health. It is expected to open in the fall of 1949.

The new school was made possible by a $13,600,000 grant from the W. W. Mellon Educational and Charitable Trust Fund. Dr. Parran, who has already assumed his new duties, will serve as consultant to Chancellor R. H. Fitzgerald on the medical sciences.

At the annual meeting of the **Southern Society for Clinical Research** held in New Orleans, January 27, 1948, **Dr. Harold Jeghers,** Professor of Medicine of Georgetown University School of Medicine, was elected Vice President for the 1948–49 term and **Dr. Hugh H. Hussey,** Associate Professor of Medicine of Georgetown, was elected an Active member.

The Southern Society for Clinical Research was organized in 1946, following a preliminary meeting of representatives from twenty-three Southern medical schools, its object being "the encouragement of research in the various medical sciences and the establishment of a forum from which new ideas may be presented to the medical profession at large." The proceedings of the Society have appeared in the *American Journal of Medicine*.

The District Division of the American Cancer Society met in the Medical Society's auditorium, October 13, for its annual business meeting. Dr. Harry H. Kerr, President of the District Division, presided. Reports on the operation of the local cancer clinics were made by Dr. Peter Commanduras, Medical Service Director of the Society, Dr. Calvin T. Klopp, Secretary, and Frederick P. H. Siddons, Treasurer. All officers were reëlected.

Dr. Priscilla White, of the New England Deaconess Hospital, Boston, discussed "Diabetes Today" before the **George Washington University Medical Society,** October 16.

The Washington Psychoanalytic Society met in the Medical Society's Building, October 16. Dr. Harry Stack Sullivan spoke on "Some Multidisciplined International Conferences of This Summer."

Dr. John Parks spoke on "Lesions of the Vulva," September 24, before the Central Association of Obstetricians and Gynecologists, which met in Denver, Colorado.

Theodore Wiprud, Secretary of the District Medical Society, was a luncheon guest of the Prince Georges County Medical Society, October 14, during the Semi-annual Session of the Medical Chirurgical Faculty of the State of Maryland.

Miss Beatrice E. Ritter, Director of Nursing at **Gallinger Municipal Hospital,** presided at the opening of the new library at the nurses' residence, October 16. The library has been named for **Miss Catherine E. Moran,** Superintendent of Nurses from 1922 to 1945. Brief remarks were made by Dr. James A. Gannon, former Chief of Staff at Gallinger and former dean of the nurses' training school, and by Dr. Alvin R. Sweeney, Superintendent of Gallinger.

Dr. Edgar W. Davis gave a lecture in Spanish before the Sixth Annual Meeting of the Southern Chapter of the American College of Chest Physicians. The subject of his address, which was given in Havana, October 26, was "Patent Ductus Arteriosus." The Chapter held meetings the first two days, October 24 and 25, in Miami.

Dr. James A. Gannon, Chairman of the Society's Committee on Public Relations, was one of the speakers at the second general report meeting of the Red Feather Campaign for 1949 operating funds, which was held at the Washington Hotel, October 14.

Dr. Henry C. Macatee, former President of the Hospital Service Agency, was named "Red Feather Citizen" of the day for his services to the Agency.

The National Cancer Institute has announced two additional grants, totalling $157,500, for cancer research at **Georgetown University Medical Center.** These funds are part of $1,300,000 just appropriated by the Institute for cancer control and research in 26 states. The larger part of the Georgetown grant, $148,500, will be used to remodel the present animal laboratory and to add a wing to be used for research alone. The second grant of $9,000 will be used for a follow-up study of benign and malignant bone tumors, to be directed by Dr. Charles F. Geschickter, Professor of Pathology. The funds were obtained at the request of Dr. Geschickter and Dr. Murray M. Copeland, Professor of Oncology, who with Dr. Martin Rubin are pursuing special research with oil soluble metals and radioisotopes for diagnosis and treatment of cancer.

Dr. Wallace M. Yater has been appointed Chairman of the Advisory Committee of the new Cardiovascular Registry of the Army Institute of Pathology. This Registry is being sponsored by the American Heart Association. Other members of the Committee are Dr. Helen Taussig, of Johns Hopkins Hospital, Baltimore; Dr. Jane Sands Robb, of Syracuse, New York; Dr. Joseph T. Roberts, Dean of the University of Arkansas School of Medicine, Little Rock; and Dr. Jesse Edwards, Rochester, Minn.

Dr. Yater participated in the Alumni Postgraduate Seminar of the Medical College of the State of South Carolina, which was held in Charleston, November 4.

Dr. Julius S. Neviaser has been appointed Chairman of the Medical Advisory Committee of the District Chapter of the National Foundation for Infantile Paralysis by Judge Fay L. Bentley, of the Juvenile Court, Chairman of the local Chapter. Dr. Neviaser, who succeeds the late Dr. Edward Larkin as chairman of the committee, is a charter member of the Chapter, having served on the committee since its formation in October, 1944. He is a member of the staff of George Washington University School of Medicine as an Associate in Surgery, and Clinical Professor of Orthopedic Surgery at Howard University. He is also on the hospital staffs of Gallinger, George Washington, Emergency, Freedmen's and Suburban.

Mr. P. M. Talbott, Vice President and General Manager of Woodward and Lothrop, has accepted an appointment to serve as a member of the Board of Trustees of **Medical Service of the District of Columbia.**

Dr. Harold Jeghers, Professor of Medicine at Georgetown University School of Medicine, addressed the Medical Society of Mt. Alto Hospital, November 1, on "Leptospirosis in the United States." He gave a lecture on the same subject before the House Officers' Association of Boston City Hospital, Boston, October 5.

Dr. Donald Stubbs spoke on "The Treatment of Pain" at the meeting of the Graduate Nurses' Association, which was held at the Potomac Electric Power Auditorium, October 13.

Dr. J. Roscoe Creer was inducted into Fellowship in the American College of Surgeons during its recent meeting in Los Angeles, October 18–22.

Two members of the District Medical Society recently moved to North Carolina and have submitted their resignations. **Dr. Thomas G. Worth** will serve as radiologist on the staff of Rex Hospital in Raleigh, his home city. **Dr. Clifton R. Wallace** has retired from active practice and will make his home permanently in Winston-Salem. His address is 1933 Angelo Street.

Dr. Lawrence E. Putnam has been appointed Consultant to the Food and Drug Administration of the Federal Security Agency, Division of Penicillin Control and Immunology.

Dr. Edward H. Cushing spoke on "Medical Research in Veterans Administration Hospitals" before the Medical Society of Mt. Alto Hospital, October 4.

Dr. Arthur C. Christie gave a report on the Washington Chest X-ray Survey, September 15, before the 49th Annual Meeting of the American Roentgen Ray Society, in Chicago.

Dr. Norman Q. Brill was guest speaker at the meeting of the Ninth District Medical Society of North Carolina on September 30. He spoke on "Conceptions and Misconceptions about Psychiatry."

Dr. R. F. Wilkinson will spend the next year in Los Angeles, California, where he is taking a postgraduate course in surgery at the College of Medical Evangelists. Upon completion of the course he will return to Riverdale, Md., to resume practice. He is an Associate member of the District Medical Society.

Dr. W. Lewis Schafer, Health Officer of Alexandria City, Va., resigned his position, effective October 19. He had served as Health Officer since 1929.

BOOK REVIEWS

The Acute Bacterial Diseases—Their Diagnosis and Treatment. Harry F. Dowling, M.D., F.A.C.P., Clinical Professor of Medicine, George Washington University; Chief, George Washington Medical Division, Gallinger Municipal Hospital; with the collaboration of Lewis K. Sweet, M.D., Chief Medical Officer in Pediatrics and Infectious Diseases; Gallinger Municipal Hospital; Adjunct Clinical Professor of Pediatrics, George Washington and Georgetown Universities; and Harold L. Hirsh, M.D., Assistant Professor of Medicine, Georgetown University; Director of the Bacteriology and Immunology Laboratory, Georgetown University Hospital. Price, $6.50. Pp. 465, with 55 figures. Philadelphia: Saunders, 1948.

The author's objective in this well-conceived and well-executed text is to present the student, the general practitioner, and the internist with a comprehensive picture of the acute bacterial diseases, a guide to their diagnosis, and application of today's general and specific therapeutic implements. The need for such a text is manifested by the tendency, born with the advent of the "wonder drugs," to disregard the diagnostic approach and principles of general care with blanket (mis) use of chemo- and antibiotic therapy.

Part I of the book's four parts is background in diagnostic principles, general therapeutic measures, and "specific" therapeutic agents. The author's classification of the acute bacterial disease syndromes into groups based on major clinical and laboratory characteristics greatly facilitates their diagnosis. Necessary general and supportive measures are described in detail and properly emphasized. Specific therapeutic measures, including the specific serums, the sulfonamides, penicillin and streptomycin (in collaboration with Dr. Harold Hirsh) are thoroughly discussed. A convenient table is supplied giving order of preference and efficacy of the above agents in each of the bacterial diseases.

In the remaining three parts, the author draws from his great clinical experience to give a masterful discussion of acute diseases caused by the cocci (Part II), the bacilli (Part III), and the bacterial diseases in which exotoxins play a major role (Part IV). Pertussis and diphtheria are discussed by Dr. Lewis K. Sweet. Each disease is discussed as to diagnosis, general and specific therapy, and complications and their treatment.

The book is easily read and the reader's interest is heightened by the generous sprinkling of diagnostic and therapeutic hints drawn from the author's personal observations. With its pages and tables duly considered, the general practitioner and student of internal medicine will have greater confidence in handling the patient with an acute bacterial disease. This book is recommended, without reserve, to fill a prominent space on your active reading shelf.

MAJOR MAURICE B. WINSTEAD, M.C., U.S.A.

Clinical Diagnosis by Laboratory Methods—A Working Manual of Clinical Pathology, 11th ed. JAMES CAMPBELL TODD, PH.B., M.D., Late Professor of Clinical Pathology, University of Colorado School of Medicine; ARTHUR HAWLEY SANFORD, A.M., M.D., Professor of Clinical Pathology, Mayo Foundation, University of Minnesota; Senior Consultant, Division of Clinical Laboratories, The Mayo Clinic; with the collaboration of GEORGE GILES STILWELL, A.B., M.D., Division of Clinical Laboratories, The Mayo Clinic. Price, $7.50. Pp. 954, with 397 figures. Philadelphia: Saunders, 1948.

The eleventh edition, as indicated in the title, is written with the collaboration of Dr. G. G. Stilwell of the Mayo Clinic.

Until this edition, the book had not been revised for five years, and with the advances in the field of clinical pathology it was necessary for the contents of the book to be rearranged and rewritten in places bringing the text up to date. The illustrations are numerous and very good; some are new and others improved over the previous edition. The bibliography is adequate, most references are in English, and recent articles have been included. These references appear at the end of each chapter instead of being scattered as footnotes at the bottom of the pages throughout the chapters as in the previous edition. The style of the book is very good.

The first chapter is an excellent discussion of the microscope and its uses. Where necessary the material has been expanded, and instead of having a chapter for miscellaneous examinations each of these important subjects now form an individual chapter. Among the subjects are Viruses and Rickettsias, Medical Mycology, Milk and Water, and Semen and Hormones. Serodiagnostic methods now comprise three short chapters instead of one. The discussion of skin tests has been enlarged and the newer ones of clinical importance have been included. A new chapter on antibiotics (penicillin and streptomycin) has been added.

In addition to giving the technics for the various tests there is also a discussion of the interpretations of the results. The authors have continued to include an index outline of laboratory findings which is quite helpful.

For me, to write a review of a book of this type is most difficult; so much is implied by stating it is a good book that the many reasons which may be given to substantiate such a statement would only detract from it. Therefore, suffice it to say that in a field where several good textbooks are written this continues to be one of the best. It is recommended for students, technicians and physicians who are interested in this subject.

A. RALPH MONACO, M.D.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have been received for review:

A.M.A. Interns' Manual. Price, $2.25. Pp. 201. Philadelphia: Saunders, 1948.

Polio and Its Problems. ROLAND H. BERG, with a Foreword by Basil O'Connor, President, The National Foundation for Infantile Paralysis, Inc. Price, $3.00. Pp. 174, with 24 illustrations. Philadelphia: Lippincott, 1948.

Manual of Urology, 4th ed. R. M. LECOMTE, M.D., F.A.C.S., Formerly Professor of Urology, Georgetown University Medical Department; Member of the American Urological Association. Price, $4.00. Pp. 311. Baltimore: Williams & Wilkins, 1948.

Occupational Therapy Source Book, edited by Sidney Light, M.D., with an Introduction by C. Charles Burlingame, M.D., Psychiatrist-in-Chief, The Institute of Living. Price, $1.00. Pp. 90. Baltimore: Williams & Wilkins, 1948.

Psychiatry in General Practice. Melvin W. Thorner, M.D., D.Sc., Assistant Professor of Neurology, The Graduate School of Medicine, University of Pennsylvania. Price, $8.00. Pp. 659. Philadelphia: Saunders, 1948

ROBERT MESTON BOLTON, M.D.

(1903–1948)

Dr. Robert M. Bolton, anesthetist and World War II veteran, died unexpectedly in Durham, New Hampshire, September 16, 1948, only a few days after arriving there to become Director of the University of New Hampshire's Medical Student Center.

Born in Somerset, Maryland, May 19, 1903, Dr. Bolton was educated in the public schools in the District and at the Emerson Institute. Leaving school, he secured employment in the advertising department of the *Washington Times-Herald* in 1918 and remained there about seven years.

He later resumed his high school studies and matriculated at George Washington University, where he served on the editorial staff of the publication, *The Hatchet*. Graduating from the Medical School in 1931, he served his internship at Garfield Hospital and entered private practice a year later, with offices at 1835 Eye Street, N. W.

Dr. Bolton was an anesthetist and associate physician on the staffs of Garfield, Children's, Columbia, Casualty, and St. Elizabeths Hospitals during his practice here.

In February, in 1941, he entered the Naval Medical Corps as Lieutenant Commander, and served as a flight surgeon with various units in the Pacific. He was retired for physical disability in August, 1946, with the rank of Captain. After a period of hospitalization on the West Coast, he returned to this area and operated a farm near Potomac, Md., for a year. In 1947 he moved to San Jose, California, expecting to make that city his permanent home.

Dr. Bolton had been an Active member of the Medical Society of the District of Columbia since 1933. He was a Fellow of the American Medical Association and the Washington Medical and Surgical Society, and a member of the George Washington University Medical Society. He was also a member of the Army-Navy Country Club.

Surviving are his wife, Mrs. Rozelle Jett Bolton, who was President of the Woman's Auxiliary to the Medical Society of the District of Columbia in 1939–40; a son, Robert Bolton; and two daughters, the Misses Rozelle and Edith Bolton. When in Washington the family home was at 2700 36th Street, N.W.

Public Health Service—Scheele

(*Continued from page 609*)

Security Resources Board by the Congress also has increased the interest of Federal, state, and local health agencies, and professional organizations in emergency medical and health services for the civilian population.

A unit for health emergency planning has been set up in the Public Health Service to act as liaison with the Board and the Office of Civil Defense. We are working also with the Atomic Energy Commission in studies on the disposition of radioactive wastes.

In this era of rapid change, the public health and medical professions are faced with great and challenging responsibilities. We in the Public Health Service believe that these challenges can be met through exchange of opinion and information, and through coöperation between responsible agencies and the public. Our organization stands ready to play its part in working with our national and state agencies, and with the international organizations for a healthy world.

Premature Infant—Judge, MacPherson and Maksim

(*Continued from page 613*)

7. Koch, L. A., Weymuller, C. A., and James, E.: J.A.M.A., 1948, **136**, 217.
8. Beck, A. C.: Am. J. Obst. & Gynec., 1946, **51**, 173.
9. Tyson, R. M.: J.A.M.A., 1944, **124**, 351.
10. Hess, J. H., and Lundeen, E. C.: The Premature Infant. Philadelphia: Lippincott, 1941.
11. Gordon, H. H., Levine, S. Z., and McNamara, H.: Am. J. Dis. Child., 1947, **73**, 442.
12. Gordon, H. H. (Denver): Ibid., 1947, **73**, 713.
13. Wallace, H. M., Baumgartner, L., and Park, M. L.: Pediatrics, 1948, **1**, 66.

MEDICAL SOCIETIES WITH LIMITED MEMBERSHIP

WASHINGTON, D. C.

1948–1949

SOCIETY	PRESIDENT	SECRETARY	NO. MEETINGS PER YEAR	DATE OF MEETINGS	PLACE OF MEETINGS
Baltimore-Washington Dermatological	N. Kanoff	H. Robinson, Jr.	8	3rd Thursday	Alternating Cities
Clinical Club of Washington	L. G. Lewis	H. S. Bernton	8	1st Tuesday	Army-Navy Town Club
Clinico-Pathological	D. B. Moffett	T. Bradley	8	3rd Tuesday	
Georgetown Clinical	S. Hawken	W. Burch	7	3rd Tuesday	Hotel 2400
Georgetown University Medical Alumni Club	A. J. B. Connolly	O. B. Hunter, Jr.		On Call	Georgetown Medical School
George Washington University	J. I. Boyd	O. B. Hunter, Sr.	7	3rd Saturday	1335 H St., N.W.
Hippocrates-Galen	R. M. Caulk	J. L. Thompson	5	1st Thursday	
International Medical Club	W. P. Herbst	P. S. Constantinople		On Call	Carlton Hotel
Jacobi	L. Gerber	R. Stolar	8	4th Monday	
Kober	R. A. Bier	H. L. Colvin	8	3rd Monday	Army-Navy Town Club
Mackall	L. B. Gaffney	M. J. Foret	8	3rd Thursday	Kennedy-Warren
Medical Arts	V. R. Alfaro	U. V. Wilcox	8	2nd Thursday	Kennedy-Warren
Osler	W. Bruner	H. A. Grennan	8	3rd Monday	
Pan American (D. C. Branch)	C. L. Hall	P. Martinez	4	On Call	
Physician-Veterans of World War II	R. T. Holden	E. J. McDonald		On Call	Medical Society Building
Potomac Society of Anesthesiologists	J. B. Bogan	C. E. Fierst	4	On Call	Medical Society Building
Rheumatism	C. Berg	D. C. Crain	3	Oct., Mar., June	Medical Society Building
Saint Elizabeths Hospital	T. C. C. Fong	L. Yochelson	3	Jan., Apr., Oct.	St. Elizabeths Hospital
Washington Academy of Medicine	W. Overholser	E. C. Albritton	3	Nov., Jan., Apr.	Roger Smith Hotel
Washington Academy of Surgery	J. H. Lyons	L. B. Gaffney	4	2nd Monday Oct., Dec., Feb., Apr.	Mayflower Hotel
Washington Diabetes Association, Inc.	J. A. Reed	K. H. Mish		On Call	Medical Society Building
Washington Gynecological	H. Darner	J. Parks	5	4th Saturday Oct., Dec., Jan., Mar., May	Willard Hotel
Washington Heart Association	F. S. Horvath	B. J. Walsh	8	Last Friday	Assn. Hdqrs.
Washington Medical and Surgical	L. B. Gaffney	J. K. Cromer	6	4th Monday	Hotel 2400
Washington Ophthalmological	J. Sansoucy	T. Egan	5	1st Monday Nov., Jan., Feb., Mar., May	

MEDICAL SOCIETIES WITH LIMITED MEMBERSHIP—*Continued*

SOCIETY	PRESIDENT	SECRETARY	NO. MEETINGS PER YEAR	DATE OF MEETINGS	PLACE OF MEETINGS
Washington Orthopedic Club	P. J. O'Donnell	E. J. Gordon	7	2nd Monday	Medical Society Building
Washington Psychoanalytic	R. T. Morse	R. Buxton	8	2nd Saturday	Medical Society Building
Washington Society for Advancement of Psychotherapy	L. S. London	B. Karpman	8	3rd Thursday	
Washington Society of Pathologists	R. Sloan	H. L. Stewart	7	1st Saturday	Army Institute of Pathology
Washington Urological	R. Gable	C. E. Bagley	7	Every 6 weeks	Doctors Hospital
Women's Medical	C. Pincock	J. E. Renshaw	8	1st Tuesday	Doctors Hospital

NOTE: Most of these societies begin their regular meetings in October and continue through April or May. The Editorial Board would appreciate information regarding any additional medical societies not shown on this list.

Washington Physicians of Yesterday—Yarrow

(*Continued from page 643*)

Medical Association and Society of the District of Columbia in 1877 and 1879, respectively; and he was a member of many local and national medical and scientific societies, including the Zoological Society of London. In the Cosmos Club he was an active member, being one of its founders in 1878, its President in 1888, and a member until his death in 1929. He was also a member of the Metropolitan Club and the Army and Navy Club of Washington, and of the Houston Club of Philadelphia. He was memorialized in "Who's Who in America."

Dr. Yarrow was the author of numerous publications, some medical, many on natural-history subjects, reptiles, fish, etc. Notable among these were a work on "Indian Mortuary Customs," 1880, 114 pages; and a "Check List of North American Reptilia and Batrachia," 1882, 249 pages.

Dr. Yarrow died suddenly at Old Point Comfort, Virginia, on July 2, 1929. He was interred in Arlington National Cemetery. His career and interests lay deep in three fields, scientific, medical, and military. Even in his name there was a duality; his first name in the literature is given indifferently as Henry and Harry. He was a leader in the intimate group of Smithsonian scientists eminent in his time; he had long military associations; and he had the respect and esteem of his medical confreres.

John B. Nichols, M.D.

MEDICAL ANNALS

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WHAT THE PHYSICIAN CAN EXPECT FROM PSYCHIATRY*

C. CHARLES BURLINGAME, M.D., F.A.C.P.

President and Psychiatrist-in-Chief, The Institute of Living, Hartford, Conn.

I HAD already prepared my talk for this morning when I received your program through the mail, whereupon I was most impressed to learn that the theme for this meeting is "Modern Medicine and the Patient." It immediately occurred to me that "Modern Medicine and the Patient" might very well have been the title of my presentation.

It has long been my thesis that the advent of modern medicine brought new knowledge about bacteria and pathologic specimens, which I applaud, but it also brought the tendency to concentrate on the disease to the exclusion of the patient, which I deplore. Although a physician may treat a disease, he certainly cannot treat it with maximum success without treating the individual. Only now are medical men beginning to return to a consideration of the patient as a whole, and your program indicates that this group is in the vanguard of progress along this line.

Man might be said to have been dissected by modern medicine into so many pathologic entities. One group of physicians claimed the heart, the specialty of cardiology. Another concentrated on skin disorders, dermatology; another, internal medicine, and so on, including the specialty devoted to the emotions, which is psychiatry.

Whereas it is clear what the other medical specialties expect from each other (and they are working more and more closely together), my contacts with other medical men show me clearly that many of them are not at all sure what to expect from psychiatry. They are not sure what, if anything, psychiatry has to offer the patient in the way of enlightenment and treatment.

An appalling number think of psychiatry as something rare, strange and peculiar, which is connected, overtly or otherwise, with the occult or some manner of faith cure. Indeed, the entire psychiatric scheme of things is so clouded with misunderstanding that I find it expedient, if not necessary, to clarify my own position.

There are many brands of psychiatry, and psychiatrists have been cast in many roles that are not strictly medical. Psychiatrists have participated in peace conferences, assisted in the United Nations, and made studies of the effect upon the citizenry of the housing problem, the high cost of living, and so on. These efforts may be classed as social psychiatry, sociology, or something other than psychiatry per se. I do not decry any of them. Undoubtedly they are thought-provoking and important. Undoubtedly psychiatry, along with the other medical specialties, can contribute to several disciplines. However, particularly at this time, I am apprehensive about anything that takes psychiatry per se away from being a medical specialty, or psychiatrists as a group away from being physicians.

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* Delivered at the Nineteenth Annual Scientific Assembly of the Society, September 28, 1948.

By its very nature, psychiatry is easy prey for charlatanry, and intermingles in the public mind with metaphysics and cultism.

Furthermore, the terminology peculiar to our field has caused many medical men to look upon psychiatry as something foreign to the rest of medicine, beyond their use and ken. This situation is deplored by the majority of psychiatrists, particularly from the standpoint of what the physician can expect from psychiatry, and what psychiatry can expect from the physician. After forty years in the field, everything I know about psychiatry I can express in ordinary medical terminology or the English language as they obtain. I also believe that a great deal of psychiatry can be practiced every day by nonpsychiatric physicians without their knowing any terms that are foreign to their own medical language. The broad contacts of the other specialties offer a golden opportunity to apply basic psychiatric principles in the interests of preventive psychiatry.

In plain and simple language, psychiatry is the medical specialty devoted to emotional disorders, and after all, the emotional component in disease is neither new nor strange. We all know that the old-time practitioner manipulated the emotions of his patients to the degree of compensating in a large measure for lesser medical knowledge. He appreciated the importance of that intangible element in illness known as "state of mind," which was all but forgotten by men of medicine in their enthusiasm for the marvels since evolved from somatic research. As I said in the beginning, I deplore the modern science of medicine where it has forgotten the individual; in other words, where it has forsaken the art of medical practice.

You can all recall the time that some practitioners advocated complete frankness as the proper procedure in dealing with patients. I can say from personal experience that some of the results of this ultimatum, issued with no apparent concern for its psychologic effects, are nothing less than devastating.

I know of one instance where a woman with cancer was visited by her gynecologist, who subscribed to the straight-from-the-shoulder technic. Telling her quite bluntly that she had cancer of the uterus and that there was general metastasis, he further intoned that she would probably live no more than from 3 to 6 months longer. Then, being a very busy man, he marched off, leaving the patient bewildered and distraught, wandering about her home. There her husband returned, in time to prevent her suicide! Such procedure may be scientifically accurate, but is it good medicine? It is not good psychiatry. This is not a principle that the physician can expect from psychiatry.

Without singling out the specialty of gynecology, but only using it as an example, I also call attention to the gynecologist who makes a brusk, impersonal examination, and tells the patient, 'zip, zoom,' with no preparation, or even reassurance, that (1) she has diseased tubes, (2) her ovaries and uterus must come out, but (3) she has enough children and doesn't need them anyway!

I have known any number of women patients whose personalities had been sharply and disturbingly changed, not by the removal of the ovaries and the uterus, but by the removal of a part of their ego that is indispensable to the emotional integrity. Furthermore, I have seen their somatic complaints disappear with no treatment other than repairing the emotional damage that had been done. The tragic part is that probably in the majority of cases the proper application of psychiatric principles by the physician in the first place would have avoided the emotional damage altogether. An understanding of those principles, which are neither mystical nor foreign, is what the physician can expect from psychiatry.

There is the matter of hypertension. I believe firmly that, if there is the slightest tendency toward hypertension, it can be aggravated by misguided emotional involvement, with a concentration on unpleasant possibilities. Consider the 'coronary patient' who is told by his doctor that he is in imminent danger; he must go straight to bed, do little or nothing for a time, and then take things gradually, very gradually, and he may—not will, but may—live 5 years. Rest in bed and momentary relief from responsibility may be indispensable, but the mode of prescription may also spell the difference between helping the patient or making a bad matter worse.

Such a warning, or threat, whichever we might call it, was once issued to a friend and colleague of mine. He was left alarmed and tense, with an almost morbid fear of overexerting. All his movements became overcautious. An anxious expression was his constant companion; and above all, his hypertension was increasing to the danger point.

Finally I said to him, "Relax, old man. You might as well be dead as practice at it." Well, he lived for 14 years after his attack, during which time he took things much more easily than before, but I am sure he lived longer because he realized, before it was too late, that all he was being asked to do was to "be his age," and to lead a useful, but reasonable, life.

These are the profound effects that the emotions exert upon the human being in sickness and in health, and these are the principles that the physician can learn from psychiatry.

Here I would like to mention the intrinsic value of giving patients the opportunity "to get things off their chests." Among my many experiences of this sort was one woman patient inclined toward hypertension who would occasionally come for a check-up and a chance to talk things over. During her brief visits there was a fluctuation of 60 millimeters in her blood pressure without the use of drugs or anything except helping and teaching her to meet her problems, which in her case were largely centered around her husband.

Of course, some practitioners wave aside those who advocate letting the patients talk things over. They remind us that they must see at least 20 people between 2 and 4 in the afternoon, and in plain English, they don't have time to listen to all their troubles.

To them I say that, in the first place, time is not always all-important, because 1 hour with a patient may be completely ineffective, whereas 2 or 3 of the right sentences may be just what the patient needs; the right words are often as powerful as some of the pills we prescribe.

Beyond question, there are many cases that demand much time, and if the doctor does not have it, we psychiatrists urge not giving the patient the brushoff, but sending him to someone who does have the time, as well as the ability, to help him. Otherwise, the patient may become a neurotic, making the rounds of all the doctors, or he may land in the hands of the charlatans. And if you would become familiar with the thriving, damaging business of charlatanry in our country, read "Where Do People Take Their Troubles?" by Lee Steiner.

We sometimes marvel at the phenomenon of a young doctor, new in the community, who cures some patient whom none of the older, established doctors had been able to help. If those incidents were analyzed, we would usually find that the young doctor had simply taken the time to connect up some psychosomatic complaint that the other doctors had been too busy to unravel.

In my experience I have seen gastric upsets, backaches, headaches, and so on, that never would have obtained if it had not been for some underlying emotional disturbance. But so have each of you.

Hyperthyroidism, as another example, has been commonly accepted as calling for operative procedure, but we have now learned that limiting treatment to surgery alone is the major reason for unsatisfactory results, when such disappointments occur. It is evident that anyone sick enough to need surgery also needs his emotional balance inquired into to assure good results. Furthermore, in some cases, after helping the patient regain an emotional balance, physicians have found surgery to be unnecessary. This is no pearl of wisdom discovered by me. It is a statement of fact which now comes from the "mouths" of the best surgical "hands" in thyroidectomy.

As always, there is the danger of going to the other extreme, of becoming so overwhelmed by the psychosomatic viewpoint that the physical aspect of disease is neglected, perhaps to the serious detriment of the patient. I know one young psychiatrist who became so entranced with the psychosomatic factors in diabetes that in one case he failed to prescribe the physical aid of insulin, and he lost his patient. It goes without saying that physicians must maintain their equilibrium, neither treating the physical to the exclusion of the mental, nor the mental to the exclusion of the physical; because there is no such thing as a physical disease without a psychologic recording, nor a mental disease without a physical recording.

There was a time that to the best of medical knowledge, every disease was considered either as "physical" or "mental," but research has demolished that theory and torn down that scientific barrier.

For illustrative purposes, I would describe disease as being graphed in a rectangle on which a line is drawn from the lower left hand corner to the upper right hand corner. We will imagine that psychologic symptoms are all contained in the area above the line, while the somatic symptoms are in the space below the line.

Through the middle of this rectangle, we can delineate one segment that shows 50 per cent of its symptoms below the line on the somatic side, and 50 per cent above the line on the psychologic side. In that particular segment, we might, for example, place general paresis, with its symptoms more or less 50 per cent somatic and 50 per cent psychologic. We can agree that this is a disease, but we certainly cannot label it either wholly physical or wholly mental.

Over to the right in the rectangle, we can draw a segment showing perhaps 90 per cent of the symptoms below the line on the somatic side, and only 10 per cent above the line on the psychologic side. In this segment we might place the carbuncle. If you do not believe that a carbuncle should have any percentage above the line on the psychologic side, get one, and it will then be quite clear to you that in addition to the physical symptoms, the discomfort and inconvenience of the carbuncle exerts a definite effect on your personality.

Since medical men are well agreed that every disease has psychologic components, every disease must be partly above the line on the psychologic side, at least to some degree. To my way of thinking, every disease must also be partly below the line on the somatic side.

True, there is still a large group of psychiatric diseases in which we have not yet identified any somatic accompaniments; but just because the somatic accompaniments have not been identified does not mean that they are not there. With our ever-improving methods of physical diagnosis, time and effort will establish the scientific fact that there is no psychiatric disease without a somatic accompaniment.

Conclusive evidence to this effect is gradually, but continually, piling up. Remember that, with our formerly limited knowledge, general paresis was thought by some to be wholly psychologic. Now we know it is syphilis of the cortex of the brain. Involutional melancholia was also thought to be wholly psychologic. I am convinced that it is pretty well tied up with an endocrine imbalance.

Also, at the Nobel Institute in Stockholm, under the direction of Dr. T. Caspersson, important chemical differences are now being observed between the nerve cells in the frontal lobes of well persons and those of patients suffering from various so-called "mental" diseases, including the old "functional" stand-bys, schizophrenia and manic-depressive psychosis. I predict that in the not too distant future medical men will talk, and study, and treat, not this "physical" disease, and that "mental" disease, but just disease, from the physical and the emotional points of view.

In the meantime, in psychiatry more than in any other specialty, there is a demand for a house cleaning and a hardheaded differentiation between hypotheses and scientific facts.

On this basis, I decry certain present-day trends, not the least of which is the close identification between psychiatry and sex. Rather than interpreting sex as including everything from spending a connubial night to leaning on a hitching post, psychiatrists might better adhere to the conventional dictionary definition. I disagree most heartily with those who would interpret sex as the whole of life and expand the definition accordingly.

A part, but only a part, of man is his creative urge, and in turn, only a part of his creative urge is his procreative urge. Expanding the definition of sex to a meaning distinctly different from that cannot possibly aid the exchange of knowledge between scientific disciplines, nor can it contribute to patient enlightenment.

In this connection, I also take exception to any dogmatic statement to the effect that sex, in accordance with its conventional definition, is always the strongest of all human emotions. Without being vulgar, we can each recall to mind instances wherein self-preservation of the individual's social standing transcended sex as it is conventionally understood. But discussion along this line would consume the entire morning.

Another trend in psychiatry that needs practical clarification has to do with child psychiatry and its many and varied schools of thought, which run all the way from those subscribing to the theory that the child should be unfettered and completely free to "express himself" in any way he sees fit, to the school that advocates disciplinary measures and strict training in martinet fashion. Here again, going to either extreme is obviously psychiatric nonsense. I also view with apprehension any technic that routinely interposes a psychiatrist or anyone else between the child and the parent, which offers the grave danger of increasing the child's conflict, or the parent's, or both.

I also take issue with the "love starvation" school, which propounds the theory that most, if not all, emotional troubles stem from the fact that the child's craving for love was never satisfied. Proponents of this school would have us running along dripping love all over the place until the child slips and 'fractures his future.'

Happily, the majority of psychiatrists deplore such psychiatric flights of fancy. In the demanding task of getting sick people well, they prefer keeping their feet on solid ground, with a grip on the core of valid scientific fact, rather than flaunting their wings in the rarefied atmosphere of "psychiatric aviation."

Indeed, I am not appearing before you as a pedantic philosopher, nor as a mystical sage who knows the secret of the inner workings of man's wonderful mind. I profess to hold no magic key to the door of mental and emotional mechanisms, about which, in fact, we in psychiatry still know very little that can be classed as unalterable scientific fact. But I do profess that we are on the way to fashioning the keys to the diagnosis and treatment of the psychologic components of disease.

I have tried to show you the basic medical groundwork that is being laid in the field of psychiatry by physicians who are dealing in scientific fact, and hardheaded, realistic psychiatric philosophy. To solve the problem of mental diseases, we must (1) establish emotional disorders as diseases, and, as such, a problem of medicine, and (2) establish psychiatry as an enduring medical specialty working hand in hand with all other branches of medicine.

Increasingly, every medical man must be somewhat of a psychiatrist, as the surgeon must be somewhat of an internist, the dermatologist somewhat of a neurologist, and so on. The good old family physician of yesteryear helped his patient by allaying fears and anxieties, and encouraging him to face reality with courage and confidence, instead of escaping by attributing his weaknesses to factors over which he had, or has, no control. Today such aid on the part of the medical profession is doubly needed, because so much stress has been placed on the emotions that many patients are interpreting their feelings as sickness, even when their reactions are perfectly normal under the existing circumstances.

I have spoken of the kind of psychiatry that you will see, and the kind you will practice. Now, if you will bear with me, I will indulge in a confession of faith on what I believe the psychiatric specialist should know.

First, I believe that psychiatrists must use all of sound somatic medicine and all the scientific knowledge of diagnosis and treatment that has been developed by all branches of medicine. As mental disease is not a thing apart from other diseases, neither can psychiatry function effectively without working closely with the other medical specialties and utilizing their experience and knowledge.

Secondly, psychiatrists must use all of the somatic adjuvants which have been developed primarily as an aid to our specialty, such as the shock therapies and now psychosurgery and certain of the chemotherapies. In the field of psychosurgery, in which your President-elect, Dr. Walter Freeman, is the American pioneer, we have moved in a few short years far beyond the period of "ash-can selectivity," when we operated only on those patients who had nothing left to lose. The development of topectomies, the undercutting technic, and of thalamotomies, as well as Dr. Freeman's precision in transorbital technics, is being rapidly followed by a knowledge as to which patients should be operated on and which left alone, which operative technic is indicated for which patient, and what results may be expected.

Might I interpolate that the current happenings in psychosurgery leave me both comforted and alarmed. It would be a stupid person, indeed, who is not impressed with the near miracles occurring in our field through the avenues of psychosurgery, but the pioneers in the field remind the profession that these very miracles call for caution to avoid excess.

Besides somatic medicine and these somatic adjuvants, I will say that, thirdly, we must use methods of rehabilitation and reëducation. In other words, we must go about training our patients to live in society as it is now constituted, which means that the psychiatrist must forsake boondoggling for practical vocational training, avocational training, social and recreational training, and physical educational training on the basis of what society will demand of the individual patient in the future.

Fourthly, psychiatrists must have a broad knowledge of psychotherapy and its several forms. I believe that psychotherapy, regardless of its form, is essentially personal tutoring. Part of the public, and some medical men, are under the misconception that psychotherapy and psychoanalysis are synonomous. Nothing could be farther from the truth, and I feel sure that the psychoanalysts would be the first to correct this erroneous idea. Even as psychotherapy is only one of the tools in the psychiatric armamentarium, so psychoanalysis is only one of the forms of psychotherapy.

There are many schools of thought in psychotherapy, but the important over-all essential is for the therapist to learn how to use himself.

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WHAT IS A NEUROSIS*

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A NEUROSIS can be defined in various ways. Let us try the following as the starting point of a few remarks regarding the nature of neuroses: Neurosis is an illness resulting from a personality inadequately organized to meet its tasks. The strain resulting from this personality weakness may give distress and pain in any part of the body. To relieve this distress or pain, the patient must learn to live more completely and more satisfyingly. It will at once be seen that this definition is orientated toward the lay mind. It contains no technical terms and should be easily understood as far as it goes. It could be further amplified, but as it stands it should tell the patient what has brought the condition about, and something of what he can do to assist the physician in effecting a cure.

There is a particularly good reason why the definition of a neurosis should be put in language the layman understands, simply because the patient as well as the physician must understand the condition if the former is to recover and remain well.

This definition, although simple and direct, begins to pose difficulties at once. It speaks of personality inadequacies and weaknesses of adaptation, and it does not take many people long to translate these terms into phrases like "mental weaknesses" or even "weak minds." This is pretty sure to arouse dissatisfaction with the one who formulates the problem in these terms. Very few people have any sense of shame about having a weak stomach or a weak heart and may even speak of either one as a matter of pride or even present it as an evidence of superior sensitiveness. However, practically no one wants to be regarded as having any weakness in the mind or anything less than perfect mental health. We have been using the term "personality" over the past ten or more years, but practically everyone knows that personality is the sum total of experiences and is therefore only a synonym for mind. Also, it is fairly generally understood that a mature personality means mental health and an immature personality or an inadequate personality means something short of mental health. I see no way around this dilemma, however. Changing terms does not disguise for long the real essence of a problem. It seems necessary for us to face the fact that if our personalities contain weaknesses which make us ill, we shall become ill either with symptoms which resemble organic disease or these personality conflicts will give us troublesome individual and collective social problems. We deplore society's collective weakness readily enough, but we all want to think of ourselves as mentally strong individually. We are surely never going to grow stronger in personal health or social strength if we cannot face our personality inadequacies and needs.

Society gives us our personalities through contacts of the child with the parents and other adults who are the representatives of society. Hence, no one need be individually blamed if his personality structure is unable to meet the tasks confronting him. Therefore, the individual remains no more to blame for having a neurosis than the person who develops typhoid fever or tuberculosis in a community that does not have proper supervision of the rules regulating public health. The responsibility for mental equilibrium is often placed too squarely upon the individual. Neuroses represent something wrong with our social structure; they represent something wrong with our educational system; they represent something wrong with our moral and spiritual values; they represent the slowness and unevenness of man's development toward a more ideal state of living together.

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* Delivered at the Nineteenth Annual Scientific Assembly of the Society, September 28, 1948.

If we could keep some of these things in mind while we speak of an individual's personality inadequacies or weaknesses, there would be less danger of placing a stigma upon him for having a condition called a neurosis. There are many infirmities of the body which one may regret but very few of which one is actually ashamed. Yet everyone seems to assume he must receive credit for having the perfect mental adjustment.

Every decade it becomes easier to say to a patient one of the following: "You have no organic disease; your trouble is due to some emotional conflict." "You pass a good physical examination but there must be something worrying you." "I find you all right but you need to make some changes in your way of living." "Physically, you are in fine condition, but I think you need to see a psychiatrist." Nevertheless, there remain many physicians who are afraid to diagnose a neurosis lest the patient be offended and leave him or refuse to coöperate. Many times the physician reads this attitude into the patient's mind, because actually this would be the physician's response if he were told the same thing. The truth is that many patients these days ask their family doctor if they shouldn't go to a psychiatrist, or they may even try to go to one without even consulting their physician lest he be offended.

Although newspaper articles and magazine articles, various books, the movies, and the radio have doubtless scared and confused a certain number of people regarding neuroses in the past few years, these media of information have also done a service in getting the public prepared and willing to think about themselves as having personality inadequacies which could make trouble for themselves in the realm of health. This has made at least the beginning of treatment easier for the medical profession and it seems safe to say that the public is becoming steadily more enlightened and more willing to admit that it might have weaknesses of the mind. Consequently, sick people come to the physician and present themselves for diagnosis, examination and treatment, and, if it turns out that they have a neurosis, they then want to know wherein they are emotionally inadequate and what they can do about it. When a history is taken of these people, we find that some of the commoner weaknesses are as follows:

1. They have a limited ability to love or to be loved.
2. They have too many fears.
3. Instead of making a contribution to life, they want to be taken care of.
4. They have a hard time being sociable and friendly.
5. They have too much resentment, envy, or hostility.
6. They are too sensitive.
7. They are inflexible; they cannot adapt to changes.
8. They are excessively competitive.
9. They are overambitious and lead a one-sided life of work.

All these and many more are personality problems for which the mind must find some solution. Stated in another way, we can say that those who taught these people to grow up should have shown them better technics for meeting life. Lacking these technics and methods of meeting the world and fulfilling their obligations, there is a train of events which inevitably takes place in one who comes to suffer from a neurosis. When the mind fails to do its job, some part or parts of the body begin to take over the responsibility of the mind. Many of these phenomena begin in early childhood, but they may not produce symptoms until the strain of life becomes too great. For instance, when a child finds it very distressing to go to school, instead of being able to say, "I don't want to go to school today because I am afraid the children will tease me and the teacher won't be kind to me," the child having become sick of the school situation expresses this idea through vomiting and is thereby kept home from school and escapes the school situation. In other words, the stomach speaks for the child and says he is sick of the task in front of him, and it also functions for the total organism by helping him to escape into temporary comfort. To some extent the idea in the mind is represented symbolically by the behavior of an organ or organ system. However, there is another mechanism at work by which emotional distress in the form of anxiety accumulates to a point where it is discharged through the autonomic nervous system to the visceral musculature, blood vessels, and glands, and causes their perverted activity. In some cases there is probably a predominance of the mechanism of symbolic representation, whereas in others there are continuous discharges of anxiety through the nervous system affecting the physiology of the body. Doubtless both phenomena are acting to a varying degree in most instances.

Therapy consists in showing the patient this cause-and-effect relationship and teaching him how to make changes in his ways of adaptation. Many physicians feel that psychiatric methods are most difficult to understand and impatiently ask, "How do you teach people to change?" Right here we feel it necessary to make a statement that may sound like a criticism but provides, nevertheless, a starting point on the subject of psychotherapy. This is to the effect that physicians are, on the whole, poor teachers. This may be because the medical course is long and arduous, and, since they have to learn so much for such a long time, they are irked with the whole business. Once having a medical degree they merely want to do, and not to teach. It would doubtless seem out of place in the medical curriculum to put in a course in pedagogy, but it would often turn out to be most helpful, at least when it comes to teaching psychiatric principles. When asked about the mysterious business of getting people to change, we might in turn ask, "How do you teach the multiplication table? How do you teach poetry? How do you teach a child to keep his room neat?" There are teaching problems confronting many people every day, especially mothers. But not many problems in teaching confront physicians daily, and only the best of them are good at teaching the patient the best rules for health. For the pupil in school one would need to be able to impart to him the knowledge that if he learned the multiplication table life would become much simpler for him and he could actually have some pleasure from his knowledge at various times. So, also, the patient who is unable to socialize would need to be intrigued with the idea that if he would learn to be pleasant to people and mix with them, go out of his way to make himself agreeable to them and come to enjoy them, he would not only have better health but he would have more pleasure in his day-to-day living. If a man is overambitious and is truculently swashbuckling his way through his day's activities, he needs to be shown that he can succeed just as well with gentler methods and can allow himself less concern over 100 per cent success on every occasion. His doubts about his ability to make good, unless he keeps functioning at a terrible pitch, can be allayed if his assets are surveyed and evaluated for him in a new light. He will accept new points of view and new evaluations if the physician shows him how a good result can follow such changes in his personality. This kind of teaching is not difficult. Like every other technic in medicine, it requires some original interest, some courage to begin using it, and the patience to develop and improve it.

These last remarks on treatment of neuroses may have gone beyond the title of this paper, which is specifically on the nature of neurosis. However, since psychiatrists are so often accused, and often justly so, for describing a condition and not saying anything about what to do about it, these final remarks on treatment prin-

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ADJUSTMENTS TO AGE*†

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THE aging process begins at birth and continues through life, at different rates for different individuals. Age is really a relative matter. Few if any other professional baseball players are like Satchel Paige, 'still going strong' well after 40. An aviation combat fighter is past his prime at 25. In recognition of this fact, it was alleged that some liquor bars during the war displayed the sign, "No drinks served to colonels in the air force who are not accompanied by their parents." Joe Louis and Joe Walcott were both considered old men when, at 34, they fought for the world's heavyweight championship. In contrast, the average doctor at 34—certainly if he has been certified by one of the specialty boards—is just getting started on his professional career.

We hear much more about the problems of old age nowadays than we did twenty-five years ago, and it is proper that we should. In the Roman Empire the average life span was somewhere between 23 and 27 years. In 1900 it was 47; now it is 67. These figures mean that man's life expectancy has been increased as much within this century, not yet half over, as in the preceding twenty centuries. In 1900, only 4 per cent of the population was 65 or older; now 10 per cent has reached this age.

THE ECONOMIC AND PSYCHOLOGIC FOLLY OF COMPULSORY RETIREMENT

This increase in the older members of the population has tremendous economic, sociologic, and political, as well as medical, significance. A large life insurance company estimates that by 1970, if the present trend continues, there will be as many members of our population on pension as at work. This means that, if we persist in the folly of enforcing retirement from work at a stated age, every worker will have to carry the extra burden of a nonproducer. One lesson that should have been learned from the recent war is that most workers are capable of carrying on long after the customary retirement age.

Just as some children develop mentally much faster than others, some adults retain their mental vigor much longer than others. The psychic trauma of being forced to retire while still in full possession of one's mental faculties is often responsible for hastening greatly the aging process.

Two recent developments in my native state of North Carolina have encouraged me to believe that the economic and psychologic folly of rigid retirement rules is being recognized by industry and government. The first was the announcement by the R. J. Reynolds Tobacco Company that it had increased the retirement age of its employees from 65 to 70 years, and that even after 70 a worker may continue to hold his job "upon request of the company and consent of the employee." The other was a reversal of the ruling of the state retirement system that men and women in the employ of the state must be retired at 70.

PHYSICAL ADJUSTMENTS TO AGE

It cannot be denied by the most confirmed optimist that, after middle life, the human machine begins to deteriorate. The muscles become flabbier, the bones more brittle, the joints stiffer; the eyesight and hearing begin to fail; the human motor, the heart, begins to show the effects of the mileage it has piled up; and in men the prostate may begin to offer some obstruction to the urinary bladder.

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There is, however, a brighter side to the picture. Vigorous exercise is seldom required of the older man; hence there is less demand upon his muscles, and he is not so apt to break his bones as is an active youngster. The hypertrophic type of arthritis which usually goes with age is far less crippling than is the infectious or rheumatoid type which is apt to begin in younger life. A firm mattress and springs ensure a more comfortable night's rest and less discomfort in the daytime.

The eyesight can usually be restored by glasses. Thanks to Benjamin Franklin's invention of bifocals, both near and distant objects can be brought into focus with a minimum of effort. As one who has worn glasses for many years, I can testify that the difficulty of learning to wear bifocals is usually greatly exaggerated. Hearing aids are much more difficult to become accustomed to, but constant improvements are being made in their efficiency as well as in their appearance. One great advantage of a hearing aid is that it can be turned on and off at will.

Among the advantages of growing older is that one usually has much better resistance to infectious diseases. Migraine usually disappears soon after middle life; diabetes is known to be less severe in the old than in the young; and cancer progresses much more slowly.

We have learned that older patients tolerate surgical procedures remarkably well. Few doctors now have the attitude, prevalent a generation ago, that no elective operations should be undertaken in patients past middle age. One victim of this attitude, whom I recall, was a remarkably well preserved man, 75 years old, who had worn a truss for 25 years because his doctor told him that he was too old, at 50, to have a simple inguinal hernia repaired. Prostatic resection is, of course, a far less formidable procedure than was the old method of enucleation.

It is generally accepted that people need less sleep as they grow older, although I cannot vouch for this from personal experience. Individuals vary considerably in their requirements. John Hunter, it may be recalled, gave the proper quota of sleep as 6 hours for a man, 7 for a woman, and 8 for a fool. It is safe, I believe, to say that it is hard for an older person to get too much sleep, but that he should not spend too much time in bed, particularly after an operation or an illness. Having witnessed one cycle of waxing and waning enthusiasm over the practice of early ambulation, I am not yet in full agreement with the current fad for getting the patient out of bed after an operation before he has entirely awakened from the anesthetic, or of cutting too short the period of bed rest after a coronary occlusion. There is, however, a happy medium to be sought, and certainly it is dangerously easy to make an older person bedfast.

Diet and Digestion

The digestive system assumes major importance in the extremes of life. No doubt most of you have heard the following definition of the three ages of man: (1) when he boasts of the pretty girl he 'dated' the night before; (2) when he boasts of the good dinner he had yesterday; and (3) when he tells everyone of the good bowel movement he had this morning. Certainly most members of the older generation attach undue importance to the success or failure of the morning visit to the toilet. Most of them are apt to aggravate their constipation by failing to eat a well balanced diet. Carbohydrates and possibly fats are often consumed in excess, and green vegetables, fruits, and meats neglected. Proteins, long overlooked or frowned upon, have come back into their own. A properly balanced diet will usually contain enough vitamins to eliminate the necessity of paying enormous prices for vitamin concentrates—though these are far less harmful than are many of the patent medicines consumed by the American public.

Coffee, tea, tobacco and alcohol are often tabooed for older patients with no more real reason than the motive which, according to Macaulay, prompted the Puritans to forbid bear-baiting: not that it gave pain to the bear but that it afforded pleasure to the spectators. Except in occasional cases, the moderate use of these substances is probably not harmful; alcohol, in fact, is often employed therapeutically for its vasodilating effect, and caffeine is likewise a vasodilator.

One real hazard to older patients is that of obesity. This may result from an increase in the carbohydrate intake and a decrease in the amount of exercise taken. Excessive thinness is far less dangerous, but it too may occur. For most people, however, especially those past middle age, dietary advice may be summed up thus: Don't eat too much carbohydrate; don't eat too much fat; don't eat too much protein; don't eat too much—'period.'

Exercise and Recreation

During the First World War, Walter Camp, Yale's most famous athlete, boasted that he kept the members of Woodrow Wilson's Cabinet in prime condition by his famous "daily dozen" exercises. The only member of the Cabinet who declined to take the daily drill was Josephus Daniels, who recently died just short of his eighty-sixth birthday, having outlived all other members of the Cabinet and having been active and useful until his last brief illness. Walter Camp himself failed by several years to reach the psalmist's limit.

Chauncey Depew, who lacked 18 days of living to 94, was quoted as saying that he got his exercise by acting as pallbearer for his friends who took exercise.

These stories are not intended to discourage exercise within reason, but, like other good things, it may be overdone. The average professional or business man usually gets more exercise than he realizes. For example, it is estimated that going upstairs is equivalent to walking 15 times the same distance on level ground, and downstairs, 5 times the level distance. Golf is a much better game for the middle-aged than tennis, but even this can be overdone. Walking is in itself excellent exercise. One bit of folly that should be stressed is that of such exhibitions as baseball games between the fats and the leans, or between doctors and lawyers. Such violent unaccustomed exertion may result in strained muscles, sprained ankles, broken bones, and even 'heart attacks.'

Recreation is needed more than exercise in the second 40 years. Reading is, of course, one of the finest ways of relaxing. Other hobbies provide excellent diversion, and the practice of allowing oneself a free afternoon each week, exclusive of Sundays, affords the opportunity to exercise them, and to relieve the tension of modern life. Frequent week-end vacations, in addition to the longer annual vacation of 2 weeks or more, are helpful.

Mental Adjustments to Age

Stuart Chase, in "The Road We Are Traveling," expressed a profound truth when he said that men "want to belong: to feel that they are a part of a living community, that they have a place in it which other people recognize." Many of the most unpleasant traits of adolescence are due to the desire, conscious or subconscious, on the part of the youngster to make a place for himself in the community and to be recognized as belonging. Just so, many of the most unpleasant traits of old age are due to the desire to continue to belong and to hold to a place in the community. The natural tendency of the elderly to become egocentric and despondent is greatly increased in the person who has not prepared for old age by cultivating a number of outside interests and who has nothing to do but to sit and think about himself.

Recognition of this principle is perhaps the greatest argument for allowing the older members of society to keep at work as long as they are efficient, regardless of their chronological age. On the other hand, the individual who prepares in advance for his retirement by cultivating interests and friendships outside his work will do much to make his latter years more pleasant.

A. C. Benson, in his essay "On Growing Older,"[1] gives four advantages of maturity:

1. "The loss of . . . self-consciousness."

2. The decreasing tyranny of convention. "I discovered gradually that to adopt the principle of doing disagreeable things which were supposed to be amusing and agreeable was to misunderstand the whole situation . . . I am not at the mercy of small prejudices, as I used to be."

3. "I do not think that life is so rapturous, but it certainly is vastly more interesting."

4. "Then, too, the greatest gain of all, there comes a sort of patience . . . One learns to look over troubles, instead of looking into them; one learns that hope is more unconquerable than grief."

SUGGESTIONS FOR MAKING MENTAL ADJUSTMENTS

May I offer, with some misgiving, a few suggestions for making mental or "psychologic" adjustments to advancing years? I have lived long enough to give them a trial, and have found them helpful in my own case.

1. First of all, one should accept the fact, firmly established in various ways, that "the mind should be at its very best when one is 40 and should continue to be a first-class thinking machine until the proverbial threescore years and ten, or even longer. Contrary to popular belief, the well-trained mind does not lose its elasticity or its ability to acquire new ideas and to reject old ones until its owner has reached a ripe old age."[2] One should remember that constant use of a brain does not damage it but helps it. The old adage, "You can't teach an old dog new tricks," should be replaced by the pertinent observation of Stieglitz[3] that "In order to teach the old dog new tricks, it is necessary to know more than the dog."

2. Cultivate the friendship of young people. Try to get their viewpoint, but prepare for occasional shocks.

3. Learn to delegate authority, and to unload responsibility on younger associates. One of the advantages of such an arrangement is that the energy and enthusiasm of youth are guided and steadied by the experience of age.

4. Keep in touch with old friends and make new ones. As Samuel Johnson said, "If a man does not make new acquaintances as he advances through life, he will soon find himself alone. A man, sir, should keep his friendship in a constant repair."

5. Cultivate wide interests. Learn new uses for one's hands and brain. Exchange more strenuous amusements for others less exciting. To quote Benson[1] again, "One ought to grow older in a tranquil and appropriate way, . . . to be perfectly contented with one's time of life . . . amusements and pursuits ought to alter naturally and easily, and not be regretfully abandoned."

6. Cultivate equanimity, "the mental poise that keeps one from being unduly elated by good fortune or depressed by bad news, and that teaches one to take fortune's buffets and rewards with equal thanks."[2] Equanimity does not mean indifference, for one should not lose his enthusiasm, which has been called "the motive power of progress." It is important, however, to keep the proper balance between emotions and reason. I know of no better way to acquire this ability than to read and assimilate into one's everyday thinking Sir William Osler's classic essay called "A Way of Life."[4] Ever since I first saw this little book on a patient's bedside table many years ago, I have never been without a copy of it and have prescribed it for hundreds of patients. This way of life is, in Osler's own words, "the practice of living for the day only, and for the day's work, life in day-tight compartments."

7. Cultivate the habit of living in the present and looking to the future instead of dwelling on the past. The old person who, like Coleridge's ancient mariner, persists in long-winded reminiscences of past exploits is apt to be shunned by his younger associates and even by his con-

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THE UNCOÖPERATIVE PATIENT—A THERAPEUTIC CHALLENGE*

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EVERY doctor has had vexing experiences with "uncoöperative" patients who cannot seem to make clear what ails them, inexplicably fail to improve, overtly or covertly disobey instructions, and otherwise impede his efforts to practice the healing art. Such patients typically become increasingly irritating to the physician and discontented with him, until the therapeutic relationship breaks down and the same unhappy pattern is resumed with another doctor. The thesis of this paper is that uncoöperativeness is not a sign of moral turpitude, but a symptom requiring study and treatment. The patient would not come to the physician unless he were in distress. The presence of attitudes tending to interfere with treatment increases the difficulty of the doctor's task but does not lessen his responsibility. The cause of uncoöperativeness usually lies in attitudes toward the doctor and his illness which the patient has failed to communicate. Treatment consists in aiding him to become clearly aware of and to communicate these attitudes and in helping him to overcome them.

MANIFESTATIONS OF UNCOÖPERATIVENESS

The many manifestations of uncoöperativeness[1] can be conveniently grouped into two categories:

A. Inability clearly to state the complaint. These patients "cheat at the diagnostic game."[2] Their histories are vague, circumstantial and inconsistent, their symptoms without apparent organic basis, intractable and often protean. The real pathogen is usually a living difficulty which the patient cannot express because it is unclear to him, or because the doctor seems unreceptive. An elderly lady was admitted to a busy surgical ward with pain in an amputation stump which failed to respond to several weeks of intensive local treatment. A psychiatric consultant merely by showing a friendly interest elicited many personal problems which, she said, she had been afraid to mention because no one seemed interested. A social worker helped her with some of them and she promptly stopped complaining of pain and could be discharged.

B. Sabotage of treatment. The most common form of this is failure to follow the therapeutic regimen while pretending to do so. Such behavior is especially annoying because it seems to be motivated by sheer maliciousness. Actually many other attitudes may underlie it, among them:

1. Revolt against a restrictive therapeutic regimen, especially by young or aged patients with chronic disease. The youngsters rebel because it prevents their equal participation in activities,[3] the oldsters because they dislike making their last days more miserable on the chance of prolonging them a little.

2. Religious belief. A diabetic was repeatedly brought to the hospital in coma, successfully treated and sent home, only to return a few days later in the same condition. It finally was discovered that she was a Christian Scientist who refused insulin as long as she was conscious.

3. "Flight into health" to escape from anxiety caused by illness.[4] Patients with this pattern refuse to admit they are ill and therefore to follow treatment. It is not rare in certain

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patients with coronary disease, who may hasten death by unwillingness to accept necessary restrictions on their activities.

4. Inability to tolerate deprivations imposed by therapy. The best examples of this are obese patients whose anxieties drive them to overeat and avoid exercise. Had they been able to control their eating they would not have required medical care. They need above all emotional support and sympathetic understanding to reduce their anxiety to such a point that they can discipline themselves.[5]

5. Mild delirium. Clouding of consciousness due to cerebral metabolic disturbance may be overlooked when unaccompanied by hallucinations or acute anxiety. There may be merely mild disorientation, memory difficulty, and emotional instability causing the patient to forget or disobey orders. If an elderly or seriously ill patient becomes emotional or uncoöperative, the possibility that he is delirious should be checked by simple tests of orientation and calculating ability.[6]

6. Apparent lack of desire for recovery. Occasionally illness may subserve some clear ulterior motive, such as continuance of a pension. Rarely the patient, because of a pathologic attitude toward doctors or to confute his relatives, may want to prove that the doctor cannot help him. Some have a suicidal urge. These types present great treatment difficulties, because revealing such attitudes involves considerable risk of rejection by the doctor and damage to self-respect, but they are sometimes accessible. One should be especially cautious about labeling such a patient a malingerer. Army psychiatrists agree that even in situations where illness permitted escape from extremely dangerous duties, out-and-out malingering was rare.

More commonly the patient clings to illness because it satisfies certain emotional needs, or because he is afraid to face the responsibilities of life as a healthy person. This pattern is sometimes seen in demoralized, chronically ill patients whose chief emotional satisfaction lies in the attention they receive because of their illness.

ATTITUDES CONDUCIVE TO UNCOÖPERATIVENESS

Doctor and patient usually first meet as strangers. Each has certain expectancies with regard to the other which tend to distort their perception of the actual relationship and may lead to misunderstandings seriously impeding therapy. The patient's view of the doctor is influenced by the latter's role in our culture, his own earlier experiences with doctors, and his attitudes toward authority figures in general. He may regard his physician as anything from a potent magician, able mystically to sense and cure what is wrong, to a callous charlatan who is mainly interested in making money, or a skeptical prosecutor whose chief delight is to expose his hidden motives and catch him in contradictions.

The doctor, similarly, may convey certain attitudes, whether or not he actually has them, which may make it difficult for the patient to confide in him. Three such attitudes are:

1. Wanting the patient to be "good," that is, deferential, tractable and grateful. If a patient who stands in awe of the doctor believes this to be the doctor's attitude, he may be unable to express anything which might be unacceptable. He will tend to conceal attitudes which he thinks might be considered shameful, to pretend that he understands when he does not so that he will not be thought stupid, and to agree with what the doctor says even when secretly he disagrees, in order to appear compliant. As a result he may present a highly distorted and incomplete picture of his problems.

2. Becoming annoyed at the patient or suspecting him of malingering. Anger or suspicion not only impedes the doctor's ability to hear what the patient is trying to say, but arouses anxiety or hostility in the patient which further distorts communication. A vicious circle is set up which is usually broken by the patient seeking some other doctor whom he approaches with anxiety and distrust because of his previous experience, making successful treatment even more difficult.

An apparent malingerer had been supported by the Red Cross for over a year because of intractable chest pains without discernible cause. He responded rapidly to a doctor who accepted his complaint as real, but as resulting from a personal problem he had been unable to reveal. Once convinced of the doctor's acceptance he told that his chest symptoms began on the death of an older sister from tuberculosis. She had "bragged on" him and had been his only emotional support. He blamed doctors for her death. As his pains began to impede his efficiency, his self-respect, already deprived of its main support, rapidly crumbled. It was further demolished by doctors' apparently cavalier attitude toward his complaints, which strengthened his distrust of them and the conviction that nothing could be done. This vicious circle culminated in complete incapacity. Following five interviews in which these misunderstandings were resolved his symptoms largely vanished and he went back to work.

3. Regarding the patient as a specimen of disease rather than as a suffering human being. This attitude, which is especially seductive because it seems "scientific," readily fosters misunderstandings. It may lead to unnecessarily exhaustive or repetitive laboratory studies which keep the patient in needless suspense, and may suggest to him that the doctor does not know what to do and is fumbling around. More seriously, it leads to bedside discussion of the patient's condition as if he were not there, with indiscriminate display in his presence of mysterious charts and X-ray films, and bandying about of esoteric medical jargon which supply fuel for his anxieties. He may conclude that he could not possibly interest the doctor in his personal problems and abandon all attempts at real communication.

A research physician studying the effects of thiouracil on thyrotoxicosis was much puzzled by the failure of one patient to respond to the drug. After worrying over this for months, he discovered that she was not taking it regularly. Further study revealed that her failure to improve gained her a lot of attention from the doctor, in sharp contrast to the attitude of her husband who refused to give her any extra consideration because of her illness. After this had been brought out and discussed, and the doctor continued to give her ample attention even when she responded adequately and no longer worried him, there were no further management difficulties.

Treatment of Uncoöperativeness

Treatment of uncoöperativeness consists essentially in helping the patient to reveal and overcome attitudes which impede recovery. The task is complicated by the fact that these attitudes are often excluded from awareness because they are anxiety-laden. Anything to which anxiety is attached tends to be pushed out of consciousness.[7] A common example is the blindness of many hopelessly ill patients to their condition in the face of overwhelming evidence of it.

The successful treatment of uncoöperativeness is based on the establishment of a relationship of mutual trust between patient and physician. To the extent that this is achieved, misunderstandings and the anxieties arising from them disappear and the patient derives courage to face his misgivings about the illness itself. As a result, hidden attitudes come to consciousness, can be divulged, and can often be successfully combated. Means of developing a good therapeutic relationship have been extensively discussed in recent literature.[8, 9, 10, 11] Here attention is confined to the reflective method of interviewing to facilitate communication and group therapy as an aid in surmounting pathogenic attitudes.

1. *The reflective technic of interviewing.* The customary method of eliciting the patient's history through direct questions may block revelation of emotional difficulties. The patient expects to be questioned about bodily symptoms and knows that he obtains the doctor's good

opinion by answering as fully and honestly as possible. However, if asked about a personal matter not obviously related to medicine, his first instinct is to protect himself. If his problems are severe enough to cause him to feel ill, he almost certainly is sensitive about them and will hesitate to reveal them. It is not easy to admit that one is fearful or has difficulties with his wife or cannot earn a decent livelihood.

The patient can be helped over this obstacle by a technic which psychiatrists have found helpful. This has been called variously the associative anamnesis,[12] active listening, nondirective interviewing, and the reflective method. It consists in re-stating to the patient, sometimes in the form of a question, what he has said, using his own words as much as possible. For example, a patient, in telling of his migraine headaches, mentioned that he developed a severe one in the streetcar on the way home from work, and went on to say that he was late and his wife didn't like him to be late. If the doctor had asked, "How do you get along with your wife?" the patient's first impulse would probably be to say, "Fine." Bringing up his marital difficulties henceforth would involve not only confessing that he is an inadequate male but also that he is a liar. Instead, the doctor merely repeated the patient's remark as a question: "Your wife doesn't like you to be late?" leading him to say, "Yes, she always wants to know where I've been." He stopped again and the doctor again reflected, "She wants to know where you've been?" The patient then continued, "She always thinks that when I'm a few minutes late, I've stopped for a drink," and went on to relate marital friction obviously relevant to his headaches.

A further step is to verbalize what the patient seems to be getting at before he has said it. The goal here is to reflect the patient's unexpressed attitude, of which he is frequently unaware until the doctor has expressed it. Recently a patient talked of his wife's being pregnant with their first child. Soon thereafter but apparently in another connection, he said: "I can't stand anything to come between me and my wife." The doctor, verbalizing the obvious implication, said: "Such as the baby?" The patient burst into tears and blurted out that he wished the baby would die. After this distressing thought, which had not been conscious before, was expressed it ceased to trouble him. Had the doctor said: "Do you want the baby?" the patient would have been practically forced to say "yes," thereby making it still more difficult to discover his actual feelings. In short, the reflective technic conveys that the doctor is sensitive, understanding, and able to accept the patient's feelings without censure. It further aids the patient to talk by not limiting his replies and by not putting him in a position where he has to save face by giving an inaccurate answer. It thus facilitates the growth of mutual understanding.

2. *Group therapy.* Often bringing a pathogenic attitude to consciousness is sufficient to dispel it, as in the foregoing example. This may not suffice when the patient cannot muster the courage to work on his problems or the self-discipline to maintain a difficult therapeutic regimen. One beneficent influence in such cases, which is insufficiently used by doctors, is that of the group. Physicians' reluctance to use group methods probably springs from the tradition of the privacy of the doctor-patient relationship, which group treatment might seem to violate. Experience has shown that the most sensitive and intimate problems can be discussed in therapeutic groups. In fact, some patients can more easily bring up painful matters in the relatively anonymous atmosphere of the group than in a face-to-face relationship with the doctor. If patients are convinced that the group has a therapeutic purpose and that they are trying to help each other solve common problems, no difficulty with betrayal of professional confidence should arise.

Group therapy may be especially helpful in treating chronically ill patients who are prone to low morale and poor self-discipline.[13, 14, 15] The relative effectiveness of group as opposed to individual influences in aiding people to follow a prescribed regimen was well shown in a recent experiment.[16] It had been noted at a maternity clinic that mothers frequently were careless about accurately following instructions concerning feeding their infants orange juice and cod-liver oil. In the experiment mothers were divided into 2 groups. In 1 group, each was individually instructed in a half-hour interview. The other mothers were instructed by the same instructor in groups of 6. The group discussions also lasted about half an hour. After 4 weeks a check-up showed that almost all the mothers seen in groups were still following instructions, while only about half the mothers instructed individually were doing so. In short, the method of group discussion was about twice as effective as individual instruction and took only about one sixth as much time.

There are many forms of group therapy ranging from didactic lectures to free discussions in which the physician's chief function is to stimulate the interchange of feeling and ideas. While the lecture method is congenial to many physicians, free discussions seem to be more potent in developing feelings of group solidarity, raising morale and changing patients' attitudes in a therapeutic direction. This matter was also investigated in the psychologic experiment just cited.[16] The relative effectiveness of lectures and group discussions was compared in an attempt to induce housewives to add viscera to the family diet as a means of conserving meat. The housewives were divided into small groups. Some groups heard a persuasive lecture. The others were run on a discussion basis, followed by a request for a show of hands of those willing to serve the new meats. A check-up after several weeks showed that only 3 per cent of the housewives who heard the lecture had served a meat they had never served before, while 32 per cent of those who had reached a decision after group discussion served a new meat. Thus the discussion method was approximately 10 times as effective as the lecture method.

Seeing patients suffering from the same illness simultaneously enables one to convey to them information which they must all know, with a marked saving of time. Beyond this, it strengthens the incentive to improvement by fostering friendly rivalry, builds the morale of the patients by demonstrating to each of them that others have similar problems, and helps each patient to maintain his own therapeutic regimen through the knowledge that the group expects this of him.

SUMMARY

Uncoöperativeness may take many forms but is usually due to misunderstandings between doctor and patient, coupled with attitudes interfering with the normal drive to recovery. It is treated by clearing up misunderstandings and strengthening the patient's morale. Two aids in achieving these goals are the reflective interviewing method and group therapy.

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RECENT ADVANCES IN CANCER

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CANCER OF THE UTERINE CERVIX

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Cancer of the uterine cervix is the most common form of cancer of the female generative tract and constitutes 65 per cent of all cancers of this region.

Although the age distribution for cancer of the uterine cervix varies greatly, the majority of patients are in the menopausal age group. A study of 2,246 cases of malignant lesions of the cervix treated at the Mayo Clinic[1] from 1915 to 1944 inclusive revealed that two thirds of the entire group were from 40 through 59 years of age.

There are two principal types of carcinoma of the cervix. The most common one is the epidermoid or squamous cell type arising from the cells covering the vaginal portion of the cervix. This type accounts for 95 per cent of all cervical cancers. The remainder are adenocarcinomas which arise in the gland cells lining the cervical canal.

For the most part, cancer of the uterine cervix is far advanced when first seen. At this stage the epidermoid or squamous variety appears as an infiltrating, endophytic, exfoliating, exophytic or crater-forming lesion. The exfoliating lesion resembles a papillary growth arising from one lip or another of the cervix and spreading over on the vaginal mucosa adjoining it. In the infiltrating type the growth is into the cervical tissue. The cervix becomes large, nodular and quite hard. Surface ulcerations may or may not be present. The crater-forming lesion appears as a punched-out necrotic crater with ragged, infiltrated margins.

That cancer may remain quiescent in a highly localized form for many years is now a well established fact. This is the intra-epithelial noninvasive carcinoma, or carcinoma in situ, which occupies a unique position in the consideration of cervical cancer. The microscopic examination reveals anaplasia without invasiveness, a condition corresponding to what many have called preinvasive cancer, or Bowen's disease. A readjustment of our concept of cancer will establish this lesion as the early preinvasive stage of epidermoid carcinoma.

Adenocarcinoma arises either within the cervical canal or in the region of the external os. When it develops within the cervical canal, it manifests itself as a hardened slightly papillary lesion which later undergoes ulcerative and necrotic changes. In such cases the cervix may appear entirely normal externally. Curettage of the canal will reveal crumbling masses of cancer tissue. At other times adenocarcinoma may present a papillary or ulcerative lesion at the external os, indistinguishable grossly from the epidermoid type.

Symptoms of Cancer of the Cervix

The early preinvasive type (carcinoma in situ) is asymptomatic. After invasion is underway, symptoms develop and increase as the lesion grows. The earliest clinical symptom is intermenstrual spotting or bleeding. This is slight at first and usually follows slight trauma such as coitus or the insertion of a douche nozzle.

Roughly 15 per cent of patients with cancer of the cervix complain only of leukorrhea, which may be a nonbloody, watery, serous or purulent discharge. Still a smaller group are entirely symptom-free.

Clinical Stages and Histologic Grading of Cancer of the Cervix

For determining the method of management and the ultimate prognosis, cervical cancer is classified into stages. The extent of the cancer is determined by careful pelvic examination, inspection of the vaginal cavity and cervix, and rectal palpation of the parametria. The classification used is that of the League of Nations, which is briefly as follows: In stage 1 the lesions are confined to the cervix. In stage 2 there is a moderate local invasion of one or both sides but not of the wall of the pelvis. In stage 3 there is extensive local invasion or unilateral fixation. In stage 4 there is a massive local invasion and/or metastasis elsewhere.

The histologic grading is largely the pathologist's domain and will not be covered here. Suffice it to say that the greater the departure of the cellular make-up of the neoplasm from the normal histologic pattern, the more malignant the tumor and the higher the numerical grading.

In general, the clinical extent of the disease gives a more accurate index to the ultimate prognosis and response to treatment than does the histologic grade of the neoplasm.

Diagnosis of Cancer of the Cervix

The diagnosis of carcinoma of the cervix is made by removing tissue from suspicious areas for microscopic study. Only a biopsy examination is recognized as a basis for the histologic diagnosis of cancer. In the advanced case this may require only the removal of a piece of neoplastic tissue by means of a forceps or curet. In the early case the specimen must be removed from the questionable area with a biopsy forceps or scalpel.

In obtaining the specimen it must be remembered that sufficient representative material must be submitted, since the pathologist can find cancer only when it is present in the tissue examined.

In the diagnosis of the early borderline and preinvasive (intraepithelial) case, the vaginal smear method, as devised by Papanicolaou, and the "surface biopsy" cell-scraping method of Ayre[2] have a place. Here the condition is present in the cervix without a focal lesion being detectable clinically. In fact, the condition may appear to be entirely benign. A cytologic study by one of the above methods will show cancer cells. To confirm a positive result, frequently multiple biopsies must be removed from the squamo-columnar junction.

A positive smear, even on a patient free from signs or symptoms of genital cancer, is regarded as adequate indication for uterine curettage and biopsy but not as an indication for a more radical procedure prior to confirmation of the diagnosis by standard tissue sections.

In spite of arguments to the contrary, the cytologic method of diagnosis has a place in the control of uterine cancer by providing a method of early detection. The increasing number of preinvasive carcinomas of the cervix which appear in the literature today is the direct result of the application of this method. Its greatest field of usefulness will be in the screening of large numbers of symptom-free patients in the cancer detection clinics.

Two other methods of minor importance in the diagnosis of cervical cancer, namely, the Schiller tinctorial test and cervical colposcopy, have been largely discarded.

Prognosis and Treatment

In general it can be said that the present treatment of cancer of the uterine cervix is very unsatisfactory. This is a broad statement but one which will be supported by the perusal of 5-year survival rates.

Except for the early stage 1 group and the intra-epithelial type, the prognosis for the patient with this disease is very poor. The outlook is hopeless in the late stages.

Prior to 1911, when radium came into use, the treatment of carcinoma of the cervix was entirely surgical. From 1911 to 1921, because of the promise shown in the treatment of the inoperable lesion, treatment was almost entirely with radium. After 1921 deep X-ray therapy was added as a supplement to the radium therapy. With certain modifications and improvements in technic this has remained the treatment of choice for carcinoma of the cervix to the present time.

A brief review of the 5-year survival rates through these years and up to the present time will give a better idea of what has been accomplished in the management of this problem.

In 1929 Weibel[3] reported 1,000 abdominal hysterectomies performed upon operable cases of carcinoma of the cervix with an operative mortality of 13.8 per cent and a 5-year survival rate of 40 per cent.

In 1927, after the use of radium alone in the treatment of cervical cancer, Regaud[4] reported the survival of 24 per cent at the end of 5 years. By 1932, with the supplementary use of X-rays, Regaud's 5-year figures had increased to 33 per cent.

In September 1948 Munnell and Brunschwig[5] reported the 5-year end results in 1,072 patients with cancer of the cervix seen at Memorial Hospital during the period 1934 to 1941, inclusive. The 5-year over-all cure rate for the 1,037 patients treated by irradiation was 28.6 per cent. A breakdown of these figures into survival rates for stages revealed the following: There were 200 patients in stage 1 over an 8-year period, with a relative cure rate of 53 per cent. There were 339 in stage 2, with a survival rate of 33.1 per cent. The 5-year rate for 454 patients in stage 3 was 17.4 per cent. Of the 44 patients in stage 4, none survived 5 years.

From the study of these 5-year results it is reasonable to assume that radiotherapy for cancer of the cervix has reached a maximum level of efficiency.

Surgery in the treatment of cancer of the cervix fell into disrepute largely because of the high mortality rate associated with the procedure.

During the past few years certain workers in this field, notably Meigs[6] of Boston, have returned to radical hysterectomy in the treatment of certain selected cases of carcinoma of the cervix. This renewed interest in the surgical approach has been stimulated by some of the drawbacks of radiation therapy, such as the recurrence of the disease many years after treatment and the number of severe complications which have followed in the wake of high voltage roentgen therapy.

In 1947 Meigs[6] reported a series of 91 cases of radical surgery for cancer of the cervix with no mortality. The postoperative study for 3 years on 36 patients in his series revealed 28 patients, or 77.7 per cent, living and well. Of 7 patients with extension to lymph nodes, 5 are dead. Of the patients without such extension 26, or 89.6 per cent, are living and well after 3 years. The statement that radical hysterectomy for carcinoma of the cervix is accompanied by a high mortality rate is no longer valid. The chief disadvantage of surgery is that it has a very limited field of usefulness, being applicable only in selected early stage 1 cases.

However, in spite of limitations, radical surgery is the treatment of choice for stage 1 carcinomas of the cervix. For stage 2 cases a combination of radiation and surgery offers the best outlook. When the local disease can be controlled by irradiation, surgical extirpation of the iliac and hypogastric lymph nodes will lengthen the survival period.

Undoubtedly the poor results in the treatment of cervical cancer by modern irradiation therapy are due to the advanced stages of the disease when the treatment is begun. Since it has been shown that the chances of cure for this disease decrease from 16 to 20 per cent per month after the onset of symptoms, this explanation is understandable.

The problem of cervical cancer is not how to best treat the patient but what can be done to improve the over-all survival rates. The key to the solution is apparent, namely, early diagnosis, preferably in the preinvasive stage, and adequate treatment, either by irradiation or surgery. The means are at hand for accomplishing this end. A step in this direction is the encouragement of periodic pelvic examinations, certainly for patients in the menopausal age groups. The examination should include a speculum examination of the cervix, cytologic studies, and a cervical biopsy of all suspicious lesions. The motto should be, "Have your cervix examined as often as you visit your dentist."

This article would not be complete without a word about the recent surgical attempts to aid the hopelessly advanced cases of cancer of the cervix which cannot be controlled by irradiation therapy. Recently, Brunschwig[7] has reported a series of cases of advanced carcinoma of the pelvis treated by complete excision of the pelvic viscera. To date he has performed 22 of these operations with a surgical mortality of 23 per cent. At present this method of attack, while offering a ray of hope to the patient suffering from advanced cancer of the pelvis, is still experimental and must be interpreted in this light.

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President's Page

LASTING SATISFACTIONS AND RICHER REWARDS

This "message" is written at Thanksgiving time. In the turmoil of the world today, and the relative confusion of medical practice in its relation to society, doctors may ask what they have to be thankful for, and even—God forbid—may consider their professional life a thankless one.

Is it not true that doctors have more lasting satisfactions and richer rewards than members in other professional groups? So let us be thankful for the satisfaction of an enduring, and always freshly interesting occupation; for the fellowship of our colleagues and the pleasure and value of our association with them, professional or otherwise; for the opportunity of rendering special and needed service in our communities; and above all, for the reward of ministering to human beings who need our help and whom we can comfort and alleviate, even when we cannot cure.

John Minor

Editorials

THE HOLE IN THE CHRISTMAS STOCKING

Christmas for the old folks in Oregon came early this year; that is, it would have been an early Christmas if someone hadn't discovered the hole in the Christmas stocking. And who found the hole in the stocking? The big, bad investment houses, of course, Wall Street, as it were, always taking the joy out of the lives of the little fellows.

The brief Associated Press dispatch from Salem, Oregon, didn't rate much space in *The Evening Star* (November 6, 1948) as a news item and I have talked with no one else who read it. My first reaction was, what a shocking example of irresponsible voting by the American people, but maybe I'm drawing a hasty conclusion, so read it for yourself (the words in parentheses are mine).

"The Oregonians gave thumping approval at the polls to a $50 monthly old-age pension plan—to be paid regardless of the recipient's need (thus saving the taxpayers high bookkeeping and investigation costs—well planned economy). At once, bond companies withdrew bids on $2,000,000 in State bonds. 'The State is a poor risk. It's darned near insolvent,' one (nasty) investment expert explained.

"Startled Oregonians then learned their pension plan might cost as much as $9,000,000 monthly—three times what the State spends now on all its activities. (Now who could have foretold that!) Furthermore, no provision had been made to finance the pensions (a curious oversight).

"The State Public Welfare Commission announced it would send out no further old-age assistance checks until the new law is clarified. (What, no checks at all? And Christmas only six weeks away!)

"Even the Townsend Club, sponsors of the pension plan, were contrite. (Are Townsendites trifling with fifty dollars a month? But I seem to recall a goal of two hundred a month; hard to remember these small figures.)

"'It wasn't what we intended. We don't want to bankrupt the State,' their spokesman said, adding, 'we will ask the next Legislature to change the law.'" (A happy ending in the good old American way, but, in the meantime, what about the old folks?)

Yes, the next few years bid fair to bring some jolly Christmases. Santa Claus has lots of good things in his bag: for labor, repeal of the Taft-Hartley Act and a higher minimum wage law; for Negroes, a civil rights program; for veterans, a housing bill; for educators, Federal aid to schools; for Europeans, more aid under the Marshall Plan; and for everybody's stocking, at least by 1949, a gilt-edged compulsory health insurance certificate, hand-lettered by the health experts (sorry, Doctors, I don't mean you). Nor will the members of the medical profession be forgotten; they'll have a special little document of their own in their stockings, a blueprint for dispensing service, similar in design, no doubt, to the one their British cousins received on the Fifth of July (July always was a jinx for Englishmen).

Yes, we're all looking forward to Christmas, probably just tinsel baubles this year, but the real thing the next. Certainly we want free medical care, but, Santa, why not free nursing care, free dental care, free medicine, and free hospitalization. Let's not be penurious in handing out benefits. We're a rich people.

I know it's a bit out of place, certainly when we're all in a holiday mood, to mention what these gifts will cost and who is going to pay for them. But that Oregon pension disturbs me a little—just as those old folks were reaching out for their fatter fifty-dollar checks, why suddenly there were no checks at all.

Now take the National Health Program. Surely the experts have figured it all out down to the last nickel (they hadn't out in Oregon, though, but of course Oregon is a long way from Washington). I haven't seen many figures, but occasionally I hear a murmur of 8 per cent (4 per cent tax each for employer and employee). Now perhaps to most people 4 per cent is a mere pittance, but to me 4 per cent is a lot of money, and much as I would like free medical care and free dental care, and all the other benefits, honestly, I don't want to give up 4 per cent of my salary to have them. Then, too, (guess I'm just a worrier) what assurance would I have that even 4 per cent is going to be enough? Lots of folks will have more time to go to the doctors when they get free care. I have never liked to wait in line when well, let alone ill, no, not even for nylon hosiery, and I have just a vague apprehension that when we get free medical care lots of us wage earners will prefer staying home from work looking at the nice gilt-edged certificate to waiting in a long queue for a harassed doctor to hand us a prescription so we can get back on the job. I guess Aesop would have called such a situation killing the goose that laid the golden egg. (But why bring Aesop into it? Even children don't read his silly fables any more.)

One more thought occurs to me regarding the 8 per cent. Did the experts arrive at that figure on present-day earnings and present-day employment? Because, while I don't want to seem pessimistic, what if there should be a recession (oh, my, no, not a depression—we'll never be foolish enough to let ourselves in for that again)? I mean just a little recession where maybe just a few million are unemployed and I'm not. What about that 4 per cent from my salary? Is that still going to be enough? Or can we count on a recession in illness along with unemployment?

I wish I hadn't seen that item on the Oregon pension checks. It's those little things that are always so disturbing. What things cost, who pays for them, where do they come from—all such elementary questions. Maybe it goes back to my own childhood. I was born to practical parents who thought that all this Santa Claus was a lot of nonsense, and we grew up on such quaint theories as, "You only get what you pay for" and "You never get anything for nothing," —almost laughable in these days of unlimited getting and spending.

I suppose we children missed a lot at Christmas, because we knew who put the toys in the stocking and who paid for the toys. But we knew too that the toys would always be there, partly because we put some of them there ourselves with our own summer earnings (not allowances, by the way). No, there were never any illusions about our Christmases. Sometimes I wonder whether the spirit so prevalent among people nowadays of wanting everything for nothing might not hark back to their own Santa Claus days. So many folks, even social planners, seem all mixed up when they talk about our Government. They seem to think that Uncle Sam and Santa are one and the same person, when everyone ought to know by this time that the real Santa is the wage earner (I almost said American wage earner—we Americans are so egotistical) and that, obviously, the only way to keep the Christmas stocking from bursting is not to stuff it too full.

A. L. E.

SO THEY MAY EARN THEIR DAILY BREAD

Recently a big league pitcher was stricken ill during a game and it was soon determined that he could never play baseball again. What was he to do? His new lease on life came through the efforts of admiring fans and sympathetic associates who raised a very substantial sum of money in his behalf. The problems of the future were greatly diminished for this particular individual.

But what about Mr. Average Citizen?

As physicians, we are often plagued with sympathy for the patient who has suffered severe illness necessitating a change in his entire vocational life. Almost daily we see patients to whom we can give only empty reassurances as to their future prognoses following convalescence from incapacitating injuries or diseases.

All too frequently, the minds and personalities of such patients are distorted by worry as to what the future will hold for them and their families. The effects of fear of dependency and inability to make suitable vocational adjustments are certainly serious deterrents to ultimate medical recovery. It is no wonder, therefore, that we constantly wish there were some one we could turn to for help with assurance that we would not lose such patients' confidence and personal relationship.

Unfortunately, many of us do not know that a public agency exists in this community with responsibilities to provide any services necessary in restoring disabled persons to suitable employment. That organization is the District of Columbia Rehabilitation Service of the Federal Security Agency, which was created by Act of Congress in 1929. Last year, your society established a committee to work with the Rehabilitation Service and to bring information to your members concerning this service. Indicative of the small number of physicians who know and use this Service is the fact that only 3 per cent out of almost 1,300 persons referred to this agency in the fiscal year 1948 were referred by physicians. More unfortunate than the small number of disabled persons referred by physicians is that, since the vast majority are not referred by physicians, months and years elapse between the time of their disablement and the time they are referred to the District of Columbia Rehabilitation Service. Since disablement is primarily a medical problem and since the success of rehabilitation is dependent on early referrals, it is obvious that the physician has an important role in the vocational rehabilitation and ultimate adjustment of the individual.

The District of Columbia Rehabilitation Service renders the following services to eligible disabled residents in the District of employable age to supplement medical treatment programs:

1. Physical diagnoses to determine the disabled person's physical abilities and limitations. When such a person is receiving treatment from his physician, the Service secures medical reports from him and all subsequent planning is checked with such physician before proceeding further.

2. Counseling and guidance in selecting a field of work compatible with the patient's disability.

3. Psychological testing and evaluation of the individual's abilities, aptitudes, interests, etc.

4. Vocational or educational training to equip the disabled patient with suitable occupational skills and insure his security in employment.

5. Providing for the maintenance of the disabled person undergoing rehabilitation, to the extent that he is in financial need, in order to insure that his basic needs of food and shelter are cared for.

6. Physical resoration services that are necessary to overcome a vocational handicap and for which services the individual is unable to pay. These services include physical therapy, occupational therapy, artificial appliances such as legs, arms, hearing aids, glasses, hospitalization, convalescent care, etc.

7. Placement of the disabled person in suitable, remunerative employment to safeguard

such a person and insure full utilization of his skills.

8. Follow-up on performance after being placed on a job to render any other adjustment service the individual may need.

It is obvious that these are the types of services many of our patients need if they are to achieve success in (1) safeguarding the gains of medical treatment, and (2) returning to self-supporting employment. District of Columbia physicians can call on the Rehabilitation Service with assurance that it maintains professional standards designed to promote the doctor-patient relationship. The standards of this Service have been established with the assistance and coöperation of a Medical Advisory Committee, composed of a distinguished list of general practitioners and specialists, and the District of Columbia Medical Society.

The records of the District of Columbia Rehabilitation Service are full of success stories. Rehabilitation can be justified from the dollars-and-cents point of view without recourse to sentimentality. It is estimated that the 321 disabled persons who completed their rehabilitation in the fiscal year 1948 will earn annually upward of $650,000. This is exclusive of thousands of dollars which otherwise would have been spent in supporting such persons in idleness. They become tax contributors instead of tax consumers, and, of course, the value of restoring self-respect to such individuals is far beyond any materialistic evaluation.

This is a program worth knowing about. It is particularly important to know that the services of this program are available to eligible clients, not as a matter of charity but as a legal right. Physicians should therefore have no hesitation referring any patient they may feel is in need of such services. It is obvious that the use of this program by physicians in their everyday practice can supplement treatment and obviate the usual worries to the physician and patient alike. I am sure you will want to contact Mr. David Amato, Chief of the District of Columbia Rehabilitation Service, by calling Executive 6300, Extension 5791, or, if you prefer, you may call Dr. George Sharpe, Medical Consultant, on Executive 6300, Extension 5664.

WALTER H. GERWIG, JR., M.D., F.A.C.S.
Chairman, Rehabilitation Committee,
The Medical Society of the District
of Columbia.

SEX REËDUCATION

We are hearing much these days about sex education in our schools. Perhaps it would be more accurate to speak of sex reëducation rather than simply of sex education, for it is clear that children who have reached school age are generally aware of sex and have considerable, if dubious, knowledge about it with many misconceptions. We humans, unlike animals, depend largely upon our cultural attitudes to guide us rather than upon our instincts. These cultural attitudes are acquired from life's experience. All too often they are markedly unnatural to the person who possesses them. They are acquired through more or less frustrating experiences and represent a compromise between what the individual wants to do and what society says he must do.

At their best, many of life's experiences are frustrating to any child. In his confusion he looks to the significant adult, usually a parent, for understanding. From this person (or persons) he learns by imitation and identification. The former process is conscious and the latter unconscious.

When a child is confronted with something he does not understand it disturbs his sense of security. He looks to the parent for assurance and understanding. Sex in some form is constantly confronting children and as constantly they grope for answers. All too often questions about such things as the birth of a baby are answered in terms that attempt to explain reproduction without reference to sexual function and emotions. An honest, direct answer with due consideration for limited childhood understanding should be in order. If the parent has personal conflicts about sex these will be communicated to the child through his perception of parental attitudes. There may result in the child tensions leading to abnormal sexual behavior. Such behavior should not be dismissed as an expression of "unbridled passion" or "innate inadequacy."

When the child does not ask questions about sex it is often because of some reason, inherent in the attitude of the parent, which makes him fear to ask questions. It has been my observation that adults are ordinarily both fearful and poorly informed concerning sex. The creation of good sex attitudes demands exposure of the child to a warm, unafraid adult personal relationship in addition to providing mere factual data. Thus the common deficiencies of parents set up a demand for warm and skilful teaching at an early school level. It is a well known fact that in their personality growth children unfold certain sexual interests and urges. These are usually much better understood by the trained school instructor than by the parent, regrettable as that may be.

Schools are becoming oriented to the idea that a child should be prepared for happy and successful living rather than just given certain academic or vocational training. There are few who fail to see merit in this concept. Any effort that will help the child to understand himself is serious preparation for life and sound education in the best modern sense of the word. Children have a need to know the physiology of human sex. With this background they are better prepared to understand the psychology of sex and its emotional and social meanings. Worry about masturbation, seminal emissions, menstruation, and venereal diseases are sources of seriously handicapping preoccupation in children. They are told about tuberculosis; why not about syphilis and gonorrhea?

There have been objections to this sort of curriculum. These objections have been vague, general and evasive, and take little cognizance of reality. Sex attitudes are clues to attitudes on other aspects of living. Much of the vacillation, fearfulness and hostility seen in all aspects of human living can be decreased through more effective adult guidance of children with their sex problems. In the present state of our culture home influence is so inadequate, actually so negative in character, that sex reëducation in public and private schools is a critical social problem, whatever the immediate practical difficulties in shortage of trained instructors.

LEONARD M. DUB, M.D.

HAVE A HEART

This year the Washington Heart Association will participate for the first time in a Nation-wide drive for funds by the American Heart Association. The campaign already will be active by the time this appears in print. It will run until National Heart Week, which will coincide quite appropriately with St. Valentine's day.

It is believed that an appeal for money to support investigation, services, and education in the field of cardiovascular diseases will have a strong appeal to the entire public. It is generally known that these diseases head the list of mortality tables and that their lead over other causes has been increasing steadily. It should be recognized that many aspects of these disorders are as mysterious as the widely publicized "cancer" and considerably more so than certain infectious diseases on which tremendous sums are expended annually. Certainly the need for greater effort in cardiovascular research is an obvious one, and the magnitude of the problems encountered dwarfs most others. It is encouraging to learn, therefore, that about 30 per cent of all funds collected will be used to promote investigations of these problems.

The Washington Heart Association, by organization and intention, is in an excellent position to strengthen the local facilities for services and education in its field. Its members, lay and professional, have no other obligations or restrictions than are imposed by their own ideals and purpose. They need only money in order to realize the improvement in existing clinics and agencies that will bring to our citizens unsurpassed facilities for treating cardiovascular disorders.

The appropriation of money for the purposes outlined has a special appeal to physicians. They are most keenly aware of the needs. They should react favorably to the intention that funds obtained from local sources will be expended locally. There should be a strong incentive for them to match the interest, enthusiasm, and industry of the many outside their profession who are working so unselfishly on a medical project. Finally, the threat of cardiovascular disease to professional men in particular should further stimulate their interest in a natural, selfish way. For these reasons it is hoped that the physicians of Washington will give generously to the heart fund and will participate in the campaign by stimulating their patients and friends to do likewise. The Washington Heart Association is surely justified in expecting that everyone, physicians most of all, will HAVE A HEART.

H. H. H.

In and Out of Focus

BY THE OBSERVER

“What Could Be Simpler?”

Hard on the heels of the recent national election, Federal Security Administrator Oscar R. Ewing spoke up on the ten-year health program which he had submitted to President Truman some months before. He left no doubt that he intended to do everything within his power to make the program a reality. In an address before the 53rd Annual Conference of the Illinois Welfare Association at Peoria, Illinois, on November 5, he reiterated statements which he has made several times before and included a few new ones for the benefit of the medical profession. He described his report as going “right down the line, item by item,” setting up a “series of specific objectives toward which we can all work.

“It proposes to institute an immediate Nation-wide recruitment of doctors, dentists, nurses, sanitary engineers, and other medical personnel, so that by 1960 our medical manpower will be 40 to 50 per cent above present figures—many of whom, under the proposed plan, will inevitably be attracted to rural and small town practice.

“To do this it proposes to build new medical colleges, expand the facilities of the present ones, and also to establish scholarships which will enable qualified young men and women to undertake the long and expensive training which they otherwise could not afford.

“It proposes during the next 10 years to increase the number of hospital beds by at least 65 per cent—the maximum goal we can hope to achieve—with special emphasis on rural districts and the smaller communities.

“It proposes to establish an integrated hospital system—a series of hospitals, one at least in every state, which will embrace every kind of hospital facility from the local diagnostic clinic up to a modern, fully equipped medical center, staffed by specialists in every field of medicine. This will serve to make available complete diagnostic facilities to every doctor, no matter how small the community in which he lives. And it will establish a system of referral for patients which will give, let us say, a farmer living in an isolated rural district prompt access, in case of need, to the most highly specialized treatment.

"The plan proposes to extend our public health services to the 25 per cent of our population, chiefly in rural areas, which do not now have even a full-time health official, and to staff fully all public health departments and house them in modern public health centers. In the small town and rural districts especially, it proposes to equip these centers with X-rays and all the other modern diagnostic facilities which the average physician cannot himself afford to purchase.

"It proposes to provide rehabilitation service for all the 250,000 men and women in civilian life who each year become disabled through illness or injury.

"It proposes to extend as rapidly as possible our maternal and child health service and various child welfare services in order to reach the millions of mothers and children who are cut off from these benefits.

"It proposes to double or triple the amount of Federal aid for medical and related research as quickly as necessary scientists can be trained for this purpose.

"It proposes to delve more deeply not only into such matters as cancer and diseases of the heart but into the causes of chronic invalidism and the diseases of old age, and to make fuller provision for extending effective medical care to their victims.

"It proposes to focus more and more attention on mental health, promote research in the field of psychiatry, and in the mental-emotional aspects of physical illness, and to expand manpower and facilities for both preventive and curative work in this field.

"And it proposes to promote dental research and expand the facilities of the schools and public health services in caring for the teeth of our children.

"Such a program, if it can be accomplished—and I believe sincerely it can be accomplished—would in truth constitute a modern miracle," Mr. Ewing observed. "With these facilities at our command we can make health bloom among large areas of our population where today there is still far too much unnecessary sickness and disease.

"But there is one other consideration which, to my mind, is vital to this whole project. That is the problem of payment for medical care."

At this point, he expressed himself in favor of "national health insurance." (The "compulsory" appellation has apparently been dropped.) He recalled that the National Health Assembly turned in a unanimous report in favor of some sort of insurance. "The only difference of opinion lay in whether the purpose would be better served by voluntary or national health insurance. . . . the chief drawback to voluntary health insurance is that the people who need it most can't afford it."

On the other hand, he argued, national health insurance ("keystone of this ten-year plan") would solve the problems of the costs of medical care for everyone. "National health insurance," he stated, "has been attacked as a socialist experiment—just as social security insurance was attacked, and just as most coöperative efforts have been attacked. In making these attacks, its opponents have indulged in all manner of abuse and misrepresentation. They have pictured it as a system under which the entire medical profession will be regimented under government control.

"The simplest way to meet such attacks is to explain how the system works.

"Suppose national health insurance should go into operation tomorrow. In every community, each doctor would decide individually for himself whether or not he wanted to practice under the system. If he decided he did, he and the other like-minded doctors would get together with the local committee set up to administer the system.

"This committee would operate on a strictly decentralized basis, much as our local draft boards operated during the War. The doctors would sit down with the committee and work out a basic set of service fees—so much for an ordinary office visit, so much, let us say, for a tonsillectomy, so much for delivering a baby. These fees would be agreed to as a fair and reasonable scale for the community for which they were set.

"Then, each person covered by the insurance would select his own physician. The physician would decide whether or not he wanted that particular patient. If later either wanted to renege on his choice, he would be free to make the change. The only difference between the insurance system and the present system is that the doctor would receive his fees out of the general insurance fund, rather than through the somewhat painful process of collecting it from his patient.

"What could be simpler?"

Mr. Ewing said that attacks on the national health insurance program could be "summarily dismissed as ridiculous if they were not backed by powerful forces in the United States whose interest is to preserve the status quo in the medical profession." He averred that there are "an increasing number of younger, more socially-minded physicians, as well as many older and more thoughtful doctors, who see the problem clear in terms of national health.

> "But even if we should agree that every doctor in the country is unalterably opposed to the system, I should still like to ask this question: Which is the more important—the personal selfish business and professional values of some 180 to 190,000 practicing physicians in this country or the health and well-being of some 70 million of our population who cannot possibly afford to pay their fees?
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> "Until we have a decisive answer to this question, we shall get nowhere. For there are literally 70 million people in this country for whom anything like the most moderate sort of adequate medical care is completely beyond their resources."

It is apparent that Mr. Ewing considers this his great opportunity to put over "national health insurance." And he is wasting no time in an effort to convince the people of its desirability before Congress convenes in January.

Needless to say, many other voices will be raised on this issue before Congress acts. Opponents as well as proponents of a compulsory insurance system will have their say. It is to be hoped that they will discuss the controversial issues more objectively than has Mr. Ewing.

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Utopian Promises vs. Sound Planning

As thoughtful physicians well know, the future of medical practice is not entirely in their hands. The final arbiter will be the people themselves. What they want, they will have. On the other hand, it is the medical profession's responsibility to give leadership in a field in which it is eminently qualified. If it is to be effective, its leadership must be informed and forward-looking. It must have the support of respected lay leaders in whom the public has confidence. Very few have so far taken the medical profession's side. There are encouraging signs, however, that such support will be forthcoming.

Mrs. Agnes E. Meyer, wife of Eugene Meyer, former publisher of the *Washington Post*, who addressed the 73rd Annual Meeting of the American Public Health Association in Boston on November 9, is an earnest, dynamic, public-spirited citizen whose thorough understanding of health and welfare problems is generally recognized. Frequently caustic in her criticism of the American Medical Association, she nevertheless has a high regard for physicians.

Mrs. Meyer began her address to the public health workers by paying tribute to the "field men" of the United States Public Health Service under the guidance of Dr. Thomas Parran. She said that what she admired most was the way in which "this Federal agency worked with state and local governments, with voluntary organizations and with the numerous Army and Navy officials. The decentralized administrative policies of the Public Health Service are, in fact, the best example we possess that Federal leadership of state and local endeavor can be achieved without Federal domination.

> "In planning for a national health program nothing is more important than the preservation of this thoroughly American tradition of Federal, state and community coöperation if our country is to remain a republic. The battle over the organization of a Nation-wide health program has been so violent because its solution will go to the roots of our existence as a Nation of freemen. What we must try to achieve is health not only of the individual, but of society itself."

She then makes a strong plea for democratic processes in the health field. She says that the national health program is a "question on which every responsible citizen must take a stand, for the answer to it will affect the whole destiny of our Nation."

At this point she took physicians to task "who seem to think they are defending individualism and freedom when they blindly oppose every coöperative endeavor of the lay public. [They] must realize that we have a mass health problem on our hands and the mass of the people want action."

Mrs. Meyer, however, did not overlook the fact that progress has been made and that health programs are under way which deserve commendation and support. She also made it clear that she had little sympathy with proponents of a compulsory health insurance system. She said:

"It is essential that the public should be informed on the actual progress toward sound public health planning that already exists in many of our states, and on a Nation-wide scale. Many people who advocate a revolutionary, overcentralized, Federally-dominated organization for health protection, do so only because they see no other alternatives. . . ."

"The utopian promises of compulsory national health insurance have led some of our people to think that all we need is Federal legislation to implement it and, presto, every medical need will be met. Advocates of the Murray-Wagner-Dingell bill should never lose sight of the hard truth that a national compulsory insurance program supplies merely organization and money but does not supply hospitals, doctors, nurses, dentists and other essential personnel.

"If our citizens learn by direct participation in planning for their own health that the problem is closely enmeshed with their daily lives and with the availability of local facilities, they will be sure to reject authoritarian overcentralized plans that might destroy the very aims they seek."

In concluding her remarks, Mrs. Meyer addressed herself to the "thorny problem of compulsory versus voluntary insurance." She said:

"The construction of adequate hospital facilities and the training of sufficient personnel to staff them must have first call on public funds, for no system of insurance, voluntary or compulsory, can have validity without them. If we rush into compulsory national insurance, the drain on public funds would be so great that the coverage of the Nation with properly staffed health departments and the Nation-wide implementation of the Hospital Survey and Construction Act would be impeded if not impossible.

"On the other hand, it is also a fact that we shall be forced to accept compulsory national health insurance before very long, unless we make a greater success of voluntary health insurance without delay, especially for the low-income groups. The fear of sickness and the high cost of modern medical care must be lifted from the minds of our people. To achieve this, the medical profession must throw itself wholeheartedly behind all coöperative insurance plans whether for medical service or hospitalization.

"The local medical societies must encourage instead of blocking the efforts of the Blue Shield to establish standards and to develop complete coverage of medical service. The various independent insurance systems in industry, labor unions, and other groups have come into being only because the Blue Shield has not improved the range and quality of its medical care. The first requisite is a predominance of laymen on the local boards.

"It is significant that the Blue Shield, which is dominated by doctors, has no standards of medical care, whereas the best coöperative insurance groups under lay control have succeeded in establishing standards over the opposition of the medical profession. As a matter of fact, the pretensions of the American Medical Association that the doctors must control the development of a national health program if it is not to create what Dr. Fishbein calls 'peasant medicine' cannot be substantiated by experience. The voluntary hospitals, America's pride, which are managed by lay boards, have always insisted upon standards, whereas the proprietary hospitals, whose boards lack consumer representation, are mushrooming all over the country, because they have no standards and any doctor with a license can work in them regardless of his qualifications.

"With the wholehearted coöperation of the American Medical Association, the Blue Cross and especially the weaker Blue Shield could raise the standard of medical care all over the country. The innumerable voluntary insurance plans if pulled together under the Blue Cross and the Blue Shield would then create the two strong Nation-wide insurance organizations we need. Moreover, insurance groups as vast as this could modify their rates for various parts of the country and reduce the rates for the membership as a whole. The names of these organizations do not matter. The important thing is that we achieve a unified system."

Your Observer recommends that physicians read Mrs. Meyer's complete address. They may not agree with her fully, but it will stimulate their thinking on the most vital problems of the moment to the public and the medical profession.

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Britain's Health Service Sputters

Reports on the progress of Britain's new National Health Service are beginning to appear with increasing regularity in our newspapers. This is perhaps natural, considering the widespread interest in health, the numerous experiments in the delivery of medical services, and the stepped-up agitation for radical changes in medical practice.

Correspondent Jessie Fant Evans, writing in the *Washington Sunday Star* for October 31, 1948, reports an interview with Miss Elizabeth W. Wilson, only woman delegate from the United States to the Centenary Assembly of the British Institute of Actuaries, which was held in London last June. According to Miss Evans, Miss Wilson devoted the past summer to studying the labor government's new program of socialized medicine. She talked to many people in all walks of life, for and against the reorganized health service—leading economists, business men, hairdressers, farmers, housewives, and workers in factories. The questions she asked them were: "Will this system result in better medical care?" and "How will you pay for it?"

The first question, Miss Wilson states, was answered in general as follows: "We shall get more care, but it will be of a decidedly inferior character." One doctor showed Miss Wilson his books for the first week of the new service. The average time which he had devoted to his office patients was six minutes. "Another physician saw 120 patients a day—two minutes apiece—in his office, and 35 in their homes!"

Miss Wilson says that hospitals cannot do much to ease the doctors' burden, because waiting lists for hospital accommodations would require three to four times the beds available. Quite a number of beds are not in use due to the shortage of nurses. An estimated 50,000 additional nurses are needed.

As might be expected, there are wide differences of opinion as to what the new system will cost. Government statisticians estimated last spring that there would be a deficit this year of more than $800,000,000 largely because of the new health service. Labor economists, however, disagree, insisting that " 'the program will not cost anything; it will involve only a redistribution of wealth.' " Others, it is reported, are greatly worried because of the probable increase in tax rate.

> " 'It is difficult to comprehend the ramifications of socialized medicine as it exists in England today,' Miss Wilson points out. 'The services of dentists as well as . . . physicians and surgeons are available. People can get extra food and gas rations, sets of false teeth, hearing aids, corrective surgical appliances of all kinds, including surgical corsets, and drugs for any ailment, provided the necessary forms are filled out by dental or medical practitioners—and some government official, who never has seen the patient, does not object.' "
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> " 'The economic threat of socialized medicine is grave,' Miss Wilson declared, 'but the legal status of doctors and dentists is potentially even more serious.' "

British physicians must register with their local Executive Council, the nonprofessional members of which are appointed by the Minister of Health Bevan. Complaints against physicians, dentists, and druggists are lodged with a governmentally appointed tribunal. This tribunal, according to a lawyer writing in the *British Medical Journal* for August 24, 1948, may act " 'in camera' " or in secret not under the law, but under " 'policy and expediency.' " Appeals are not made to the courts, but to the Minister of Health. "This makes Aneurin Bevan one of the most powerful men in England, because he is also Minister of Housing, and is in charge of the town and country planning program."

Miss Wilson finds the red tape of bureaucracy particularly disturbing. The Minister of Health, it appears, issues on the average eight orders a day under the National Health Service. "These regulations, added to 25,000 others which straitjacket many other phases of English life, will mean that Britishers will be more and more regimented."

How do physicians themselves view the situation? *The Lancet* (London) for October 16, 1948, states:

> "A bad start has been made, but it has at least had the advantage of revealing possible causes of continuing dissatisfaction. These causes being revealed, the cure should not be difficult to find. It is very desirable that discussions should be successfully concluded in time to ensure that practitioners derive due satisfaction from the cheques they will receive in the New Year."

Doctors Walk Out

In the past year, several Washington physicians have visited foreign countries. Few have traveled more extensively than Dr. Custis Lee Hall. On one of his recent journeys, he sent your Observer newspaper clippings from the *Rand Daily Mail,* Johannesburg, South Africa, for October 2, 1948, the headline of which read "Hospitals Struggle to Carry on After Doctors Walk Out." On reading the lead paragraph, your Observer learned that the "honorary medical staffs" of all Provincial hospitals in the Transvaal had walked out at midnight the night before. While the walk-out had not caused a breakdown of medical service in the hospitals, it had seriously crippled them.

It appeared that a dispute of two years' duration between the Medical Association and the Provincial Administration over the enactment of "an ordinance providing free medical care for all" had culminated in the "strike." There was little support in the *Mail's* columns for the medical profession's action. "The least the doctors should have done was to have tried out the new system," said a public official.

The biggest dislocation, it was reported, was in the outpatient department of the Johannesburg General Hospital where there were no specialists. A skeleton staff of full-time employed physicians carried on the ordinary casualty services in the city's hospitals. The total number of "honoraries" who had walked out was 133, the remaining full-time men numbering 70 or 80.

Your Observer gathered from the news report that the means test was one point at issue. However, the details given in the newspaper account were fragmentary so he turned to the Society's file of the *British Medical Journal.* He discovered that the subject had been discussed at some length in the supplement to the September 18, 1948 number, under the caption, "Free Hospital Plan in the Transvaal—Opposition by the Medical Profession." The following are excerpts from this article:

"The Provincial Council of the Transvaal—in the Union of South Africa it is the Provincial and not the Union Government which undertakes such legislation—has enacted an ordinance known as the Public Hospitals Ordinance (Transvaal), 1946, coming into operation in the present year, which provides free hospital treatment for all members of the community. The free treatment extends to outpatients and to patients attending detached clinics, as well as those in hospital beds. Such public patients, their hospital charges being met, will be given free choice of having also the medical services which the hospitals will again provide without payment or, alternatively, of selecting their own medical attendants and paying them. There is no means test.

"Hitherto about 70 per cent of European patients and practically all non-European patients have received free hospital service, including medical treatment. The remaining 30 per cent of Europeans have paid their hospital charges and doctors' fees. Henceforth the service will be free for all in the sense in which any service is free which is paid for out of taxation.

"At the same time it is admitted that there is a shortage of hospital beds and nurses, so that all patients cannot be accommodated. The Ordinance provides that the determining factor in allocation shall be the urgency of the medical need of the patient—in other words, medical necessity, not financial hardship, shall be the criterion for free treatment. The medical profession in the Transvaal, on the other hand, while in favour of a comprehensive health service, is protesting against the Ordinance on the ground that a means test ought to be imposed. The means test suggested is that single persons with an income over £500 and married couples with an income over £1,000 should not be eligible for free hospitalization. The issue really concerns those 30 per cent of Europeans who have hitherto paid for their hospital accommodation and also for their medical services while in hospital. During the two years that the Ordinance has been in the offing there have been negotiations between the representatives of the medical profession and the Provincial department, and a good deal has been achieved, but this one bone of contention—the means test—remains."

The position of the medical profession with respect to this situation is stated as follows:

"The profession has repeatedly expressed itself in favour of a comprehensive health service to include free medical care for all sections of the community. Apparently such a scheme is not yet practicable in the Transvaal, and meanwhile the profession is willing to assist in the rational development towards such a scheme. Until the whole profession can be absorbed into an organized health service, however, it is maintained that free services in hospital should be limited to the provision of accommodation, nursing, food, and ancillary services, and that free medical treatment should be confined to those who cannot afford to pay for it."

"With free medical treatment in hospitals, outpatient departments, and clinics there will be nothing left for the private medical practitioner except domiciliary services, on which many practitioners cannot make a living. Moreover, the virtual exclusion of the private practitioner from the public hospitals, owing to the availability for the patient of the free medical services of the hospital itself if he chooses to have them, will result in a lowering of the standard of professional skill and ability among private practitioners.

"The profession accordingly proposes that as there is an acknowledged shortage of hospital accommodation the Ordinance should be amended to provide that, pending an improvement in this respect, where there is alternative accommodation in private institutions or where the conditions of patients permit of their being cared for adequately at home, preference in the allocation of the available hospital beds should be given to the poor.

"As a means of dealing with persons of the middle-income group who are liable to be embarrassed by the expense of serious illness, it is suggested that they should insure themselves against such contingencies. It is stated that in the Transvaal already there are several hundred thousand persons enjoying the benefits of such insurance. For those not insured the [Medical] Association has offered to work out a formula which would take into account the person's circumstances in relation to the costs of his medical care, together with a tariff of medical fees beyond which it would not be permissible for a practitioner to charge a private patient in hospital. An offer to do this was actually made to the administration before the Ordinance was enacted, but it was rejected, and the Ordinance specifically precludes the administrator from prescribing fees or charges payable to private medical practitioners in respect of inpatients who may elect to be treated by them."

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Mortality Among Specialists

Having investigated the longevity and mortality of American physicians engaged in all types of practice, the *Statistical Bulletin of the Metropolitan Life Insurance Company* for September, 1948, turns its attention to specialists. The original data have been analyzed further in order to determine the mortality among specialists as compared to that among general practitioners, and how it varies in the several specialties.

Of the 175,146 physicians in the American Medical Directory in 1940, about 37,010, or 21.1 per cent were listed as full-time specialists. "The mortality among specialists at ages 35 to 74 years," the *Bulletin* states, "is only 78 per cent of that for all male physicians at these ages; for nonspecialists the corresponding ratio is 110 per cent. From these figures it is evident that the mortality of specialists, as a group, is about one third less than that of nonspecialists. The advantage of the specialist is somewhat greater before age 55 than after.

> "Several factors undoubtedly contribute to the favorable experience among specialists. In the first place, some self-selection may be exercised by those entering a specialty, inasmuch as a certain degree of physical well-being is required to continue studies over an extended period of years. Then, too, specialists on the whole probably have a larger income than the nonspecialists, and thus may be in a better position to take care of themselves by more frequent and longer vacations and by superior medical care. The specialists, concentrated in urban centers, have a further advantage in having accessibility to large hospital facilities and opportunities to consult with other specialists."

When it comes to longevity, it appears that the pathologists are the most favored, the mortality rates being less than three fifths that among nonspecialists. The poorest showing is made by physicians engaged in the fields of dermatology and tuberculosis, but their mortality rate was only nine tenths that among nonspecialists.

It also appears that the specialists are favored over general practitioners where some of the major causes of death are concerned. For example, cardiovascular-renal diseases account for more than three fifths of all deaths among specialists ages 35 to 74, or a mortality rate of 81 per cent. Among nonspecialists, it is 108 per cent. In diseases of coronary arteries and angina pectoris, the difference between the specialists and general practitioners is slight. This prompts the *Bulletin* to observe, "Apparently whatever benefits specialization may bring, they are not great enough to overcome the tensions of medical practice. . . . Of all the specialist groups, only internists and pediatricians show a mortality rate from coronary disease that is significantly lower than the average for all physicians."

Another disease in which there is little difference between physicians in and out of the specialties is cancer. Surgeons, however, fare slightly better than their fellows, which, the *Bulletin* believes, is due to their training. They recognize symptoms earlier and seek treatment. On the other hand, it is noted that roentgenologists and dermatologists have a much higher rate of mortality from cancer and leukemia than do nonspecialists. This is ascribed to the effect of their exposure to dangerous radiations.

The *Bulletin* concludes that "Specialists, as a group, have a much lower rate of mortality than nonspecialists from infectious conditions, such as tuberculosis, pneumonia, influenza, and syphilis. The specialists also fare comparatively better than nonspecialists in their mortality from ulcer of the stomach or duodenum, hernia and intestinal obstruction, cirrhosis of the liver, appendicitis, and diseases of the gall bladder. Even deaths from accidents, including automobile accidents, are relatively fewer among specialists than among nonspecialists."

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An Exploded Mystery

Occasionally when your Observer looks through his newspaper, he is mildly surprised at some of the "patent medicine" advertising. He finds it difficult to reconcile the newspapers' editorial views with the unfounded claims made for nostrums and cure-alls.

There was a time when he would have called the advertising manager, reminding him that these ads not only did not enhance the dignity of his paper, but frequently endangered the health of its readers. But he has learned that this accomplishes little more than the temporary elimination of the offending matter and that he might much more profitably reflect upon the ingenuity of individuals who contrive these concoctions. Some of them undoubtedly made lots of money, led exciting lives, and had a rousing good time disposing of the wealth accumulated in the course of their lifetimes.

Dr. J. C. Hossack spins a good yarn in the *Manitoba* (Canada) *Medical Review* about the husband of one of the better known figures in the "patent medicine" world. He calls it "The Mystery of Mr. Pinkham."

"In moments of relaxation I occasionally meditate upon the greater and lesser mysteries of life, among the least of the latter being the mystery of Mr. Pinkham. There must, I reason, have been a Mr. Pinkham for how otherwise could there have been a Mrs. Pinkham? And the aforesaid Mr. Pinkham must have predeceased the aforementioned Mrs. Pinkham for how otherwise could there have been a Widow Pinkham? But who was Mr. Pinkham? Considering how much we know about Lydia it is remarkable that we are so ignorant about Percy. Indeed I am not even sure that his first name was Percy but Percy (or Percival) Pinkham is a cognomen both alliterative and euphonious and, as we must have some way of designating him, we shall use the name Percy for that purpose.

"The circumstances under which Percy wooed and won his Lydia are unknown to us. We are certain only of the facts that 'to the nuptial bower he led her, blushing like the morn,' and that, for some reasons best known to herself, Lydia developed a keen interest in the physiological irregularities of her neighbours. This interest, at first purely neighbourly, became practical and finally commercial when she found that she had concocted the nicest little pelvis-tidier-upper that any mortal had yet managed to coax into a bottle. Those were the days when it was a 'cure.' It circulated through those regions modestly referred to in Victorian times as the 'body' or 'stomach' or, more daringly, 'the inward parts' and cleaned up many a spot of bother such as a bit of prolapse or a tumour or the various kinds of leakiness which showed that the aforementioned 'inward parts' were 'weak.' Somehow or other it ceased being a 'cure' and sank to the level of a 'remedy' but even in this attenuated form it still worked wonders for the advertisements proclaimed that out of every hundred users ninety-eight found it the next best thing to the Elixir of Life. Thus Lydia, operating in a different way, carried on the tradition of Sir Lancelot and Amadis de Gaul in bringing relief and happiness to distressed maidens and suffering dowagers. Indeed, its virtues are even greater than are claimed, for I recall a gentleman telling me that he had cured himself of diabetes by using the famous compound. This incidentally raises the question whether or not this person was one of those peculiar individuals whose endocrines, suffering from a sort of physiological *folie de doute* cannot make up their minds with which sex to endow their possessor.

"Our concern, however, is not with the fair Lydia but with the gentleman to whom she gave her heart and hand and whose name she made famous. I have sometimes, in very idle moments, allowed my thoughts to turn to the circumstances of his demise, or rather to the probable circumstances for I have no certain information upon the matter. Yet I feel sure that skillets and pharmacological experiments must have played a part. Indeed all that one need do to reconstruct the scene is to imagine himself coming home each evening tired and hungry only to find the kitchen stove covered with stew-pans filled with messes designed to assuage not the physiological, supra-umbilical discomforts of a hungry husband but the pathological infra-umbilical gnawings of dysmenorrhoeic neighbours. You can just see Percy rubbing his hands and coming through to the kitchen where Lydia is hard at work. 'Well, Bright-eyes,' he says, 'what's cooking?' It didn't take him long to find out that there was nothing there for him. Now a man can stand only a certain amount of this sort of thing. Sooner or later it gets him down and then the first thing you know is that he is conducting pharmacological experiments of his own and doing things with raisins and yeast cakes. That, I think, is what happened in the case of Percy; and, as I imagine it, here is the last scene of all that ended Mr. Pinkham's strange eventful history. One night Percy was groping about in the cellar trying to remember where he had hidden his latest experiment when by accident he came upon a bottle of his wife's home brew instead and took a good swig of it. Immediately the leprous distillment coursed like lightning through all the natural gates and alleys of his body looking for a uterus into which to set its teeth and, being disappointed in not finding this necessary but unmasculine organ, it went completely berserk, reduced itself to atoms, split these atoms and blasted the bewildered Percy into the nowhere out of here. This is not to be accepted as an authentic record of the deep damnation of his taking off but as a logical deduction from the few available facts. The moral is that ladies with a yen to fix up their neighbours' insides should leave the care of such intimate and intricate problems to the gynecologists. These may not be as good as the stuff you get in bottles but they are easier on the husbands."

T. W.

NEW DEVELOPMENTS IN CANCER RESEARCH

George Washington University and Georgetown University Schools of Medicine are working out joint programs with the National Cancer Institute whereby facilities of the schools will be used for cancer research by staff members of both the Institute and the medical schools.

At George Washington three initial studies are under way:

1. Endocrine and metabolic aspects of cancer of the breast, prostate, uterus, ovaries and testes, including the role of hormones in causing cancer and possible use of hormones in therapy.
2. Studies in nutritional aspects of cancer of the gastrointestinal tract, particularly nutritional abnormalities that occur with cancer of this type, such as failure to absorb certain foods. The first study concerns the metabolism of vitamin A.
3. A study of metabolic aspects of nitrogen-mustard therapy in lymphoid diseases such as Hodgkin's disease, lymphoma, and various forms of leukemia.

Dr. Roy Hertz, Assistant Professor of Medicine at George Washington and Chairman of the Endocrinology Section of N.C.I., has been named chairman of a committee to develop and direct the new program. Other members of the committee will be Drs. Brian Blades, Thomas M. Brown, Calvin T. Klopp, Paul K. Smith, Thomas M. Peery and J. Keith Cromer.

The new program will be financed by cancer research funds which have been made available to the University by the National Cancer Institute, the American Cancer Society, and private sources.

Scientists of N.C.I., using the facilities at Georgetown, will study the role of environment in cancer. Dr. Wilhelm Hueper, Research Associate in the Department of Pathology and a staff member of the Institute, will carry out the project beginning early in 1949. Dr. Hueper said state health officials will be asked to make occupational cancer studies to aid the project, and that they are already under way in a few states.

DR. HUNTER BECOMES PRESIDENT OF SOUTHERN MEDICAL ASSOCIATION

Dr. Oscar Benwood Hunter was installed as President of the Southern Medical Association, October 27, during its 42nd Annual Convention in Miami, Florida. Well known nationally as a pathologist and educator, he carries to the office a degree of ability which few physicians possess.

Dr. Hunter became affiliated with George Washington University School of Medicine in a teaching capacity before his graduation in 1912. He was first Instructor in Anatomy; in 1913 he became Professor of Histology and Embryology, and Professor of Pathology and Bacteriology in 1916. He received a master's degree from his alma mater in 1917.

Chase-Statler

OSCAR B. HUNTER, M.D., F.A.C.P.

President, Southern Medical Association

From 1918 to 1932 he was Assistant Dean of the Medical School and director of postgraduate courses. He was pathologist of George Washington University Hospital and Dispensary from 1916 to 1932, and is now pathologist for Doctors and Sibley Memorial Hospitals, with other hospital affiliations.

Dr. Hunter was President of the Medical Society of the District of Columbia in 1928 and for many years has been Chairman of its Section on Pathology and Laboratory Medicine. He has long served as Secretary of the American Therapeutic Society and the George Washington University Medical Society, and is Past President of both these societies as well as of the Washington Society of Pathologists. He is a Governor of the American College of Pathologists, and a Fellow of the American Medical Association and American College of Physicians. He has been a Councilor of the Southern Medical Association for five years, Vice President for 1946–47, and Chairman of its Section on Pathology, 1945–46. He is affiliated with a great many other scientific organizations.

An editorial which appeared in the *Southern Medical Journal* for January 1948, shortly after he was made President-elect of S.M.A., so well describes his personality and avocational interests that a few excerpts are quoted:

"His friends know him as loyal, sympathetic and unselfish and as a man from whom many younger men have sought advice in their personal and professional problems, and in whom he has usually been able to inculcate high ideals and aims.

"None of his scientific activities has detracted from his individual social charm and ability to lead in scientific and also civic groups. He has headed several large business enterprises. The large medical center in Washington, occupying a city block, is said to be a monument to his genius, foresight and untiring effort. He is a Past President of the Kiwanis Club and a raconteur and toastmaster without peer, always popular and in demand at social gatherings.

"A good sailor and yachtsman, before World War II took his boat away from him, he entertained his friends delightfully with week-end cruises on the Potomac. He is an air enthusiast, for years having done most of his traveling the air way. Because of the large number of miles traveled he is an Admiral of the Fleet in one of the large airlines and a member of the Hundred Thousand Club in another."

Dr. Hunter is one of a select group of Washington physicians who in recent years have been so highly esteemed by their professional colleagues that signal honors have been bestowed upon them. This reflects great credit not only upon them but upon the Medical Society of the District of Columbia, which is highly honored.

Washington Physicians of Yesterday

XLII. CHARLES WILLIAM FRANZONI, Ph.B., M.D.

One of the artists who collaborated in the early embellishment of the Capitol Building in Washington, D. C., was an expert Italian sculptor, Carlo Franzoni, employed in 1816; and a marble clock in the chamber of the House of Representatives, designed by him, is pointed out to visitors as a prized work of art. One of the grandsons of this artist was Dr. Charles William Franzoni, who was noteworthy in the annals of the Medical Society for his long official service in its behalf, and who is held in affectionate memory by his still surviving colleagues.

Dr. Franzoni was born August 15, 1837, in Washington. He received the degree of Ph.B. from Columbian (now George Washington) University in 1858. During the Civil War he served in the District of Columbia militia, being said to have been the first to volunteer in that organization. In 1869 he graduated as M.D. from Columbian University, and from that time until his death in 1923 he practiced medicine in Washington. He married Sarah Cecilia Saunders, October 25, 1876, by her leaving a daughter Cecilia.

He became a member of the District Medical Association in 1872, and was its President 1891–92; he joined the District Medical Society in 1873, and served it actively and continuously as Treasurer from 1874 to 1919 (45 years), and as Emeritus 1919–23. This was a record. He was also a member of the Biological Society and of the Fourth Presbyterian Church, and was a thirty-second degree Mason

(Continued on page 702)

News and Personals

The National Foundation for Infantile Paralysis is offering a limited number of postgraduate fellowships open to physicians in the fields of research, physical medicine, and public health.

Research fellowships, which are available in virology, orthopedic surgery, pediatrics, epidemiology, and neurology, are intended to emphasize (1) advanced training in the basic sciences as they apply to the particular specialty and to research, and (2) experience in research, which need not be immediately related to poliomyelitis.

Clinical fellowships are intended for those physicians who wish to prepare for certification by the American Board of Physical Medicine.

Fellowships are available to physicians for one year of postgraduate study leading to a Master of Public Health degree at a school of public health approved by the American Public Health Association.

The fellowships are open to doctors of medicine, citizens of the United States, in sound health, as attested by a physical examination. The applicant for a fellowship in physical medicine and public health shall have completed an internship of not less than one year in a hospital approved by the Council on Medical Education and Hospitals of the AMA, and be licensed to practice medicine in one or more states. For a research fellowship, a minimum of two years' training on the residency level in the specialized field is required, together with presentation of an appropriate program of study and investigation.

Application may be made to the National Foundation for Infantile Paralysis, 120 Broadway, New York 5, New York, at any time during the year. Selection of candidates will be made on a competitive basis by committees composed of specialists in each field. Awards are based on the individual need of each applicant.

The Washington School of Psychiatry is offering a number of evening courses commencing in February 1949 that are of interest to practicing physicians. These include: The Problems of Aging, given by Dr. Edward J. Stieglitz, who is author of a recent book, "The Second Forty Years"; a Seminar on Practical Psychiatry for Physicians, by Drs. Lawrence Kolb, Dr. Edward J. Stieglitz, and others; and Psychiatric Jurisprudence, by Dr. Winfred Overholser. Further information concerning these courses may be obtained from the Executive Director, Washington School of Psychiatry, 1711 Rhode Island Avenue, N.W., Washington, D. C.

CALENDAR OF MEETINGS

November 1	Executive Board
November 4	Executive Board of Woman's Auxiliary
November 5	Committee for Health and Research
	Washington Heart Association
November 6	Washington School of Psychiatry
November 9	Subcommittee on Mental Health
	Registered X-ray Technicians of Washington
	District Dental Society
November 10	Program Committee
	Woman's Auxiliary
November 12	Subcommittee on Finance
November 13	Washington Psychoanalytic Society
November 15	Subcommittee on Finance
	Board of Trustees, Medical Service
	Graduate Nurses' Association
November 16	D. C. Medical Technicians
November 17	Scientific Meeting of Society
November 22	Executive Board
	Joint meeting of Columbia Historical Society and District Bar Association
November 23	Section on General Practice
November 26	Section on Pathology and Laboratory Medicine
November 30	Subcommittee on Mental Health
	Section on Anesthesiology
	D. C. Rheumatism Society

The Postgraduate Center for Psychotherapy, Inc., the affiliate of the Institute for Research in Psychotherapy, Inc., offers training in psychotherapy for psychiatrists, clinical psychologists, and psychiatric case workers. The primary aim of the training program is to supply increasing numbers of trained psychiatric teams to organize and operate clinics at a community level, particularly in areas where there are few or no psychiatric facilities.

Individual orientation courses in psychotherapy are also offered to psychiatrists, general practitioners, social workers, psychologists, teachers, psychiatric nurses, occupational therapists, the Ministry, and other professional personnel.

For further information write to Dr. Stephen P. Jewett, Dean, Postgraduate Center for Psychotherapy, Inc., 218 East 70th Street, New York 21, New York.

The National Gastroenterological Association again announces its **Annual Cash Prize Award Contest** for 1949. For the best unpublished contribution on gastroenterology or allied subjects a cash prize of $100 and a Certificate of Merit will be awarded. Certificates will also be awarded those physicians whose contributions are deemed worthy. The award will be made at the Annual Convention Banquet of the National Gastroenterological Association in October of 1949.

Contestants residing in the United States must be members of the AMA, while those residing in foreign countries must be members of a similar organization in their own country. The Association reserves the exclusive right of publishing the winning contribution, and those receiving Certificates of Merit, in its official publication, *The Review of Gastroenterology*.

Entries should be limited to 5,000 words and typewritten in English. The original manuscript and four additional copies should be in the office of the National Gastroenterological Association, 1819 Broadway, New York 23, N.Y., not later than April 1, 1949.

The **CIBA award** of $1,200 for meritorious work in endocrinology will be offered in 1949. The award will be given in recognition of the accomplishment of an investigator, not over 35 years of age, in the field of clinical or preclinical endocrinology. If within two years of the date of the award the recipient chooses to use it to aid in working in a laboratory other than the one in which he is normally located, the award will be increased to $1,800.

The winner of the award will be announced at the annual meeting of the Association for the Study of Internal Secretions. A special committee of five members of the Association selects the recipient of the award subject to ratification by the Council of the Association. Each member of the Association has the privilege of making one nomination.

House Officers' Night will be observed by the Medical Society, March 23, when the authors of the five best papers submitted in competition by house officers will present their essays. Manuscripts should not exceed 15 pages in length, exclusive of illustrations which may be used, and should be typewritten and double spaced. They should be mailed to the House Officers' Contest Committee, 1718 M Street, N.W., not later than February 15.

The following members of the Society will review and judge the papers; Dr. Daniel L. Borden, *Chairman;* Dr. Henry L. Darner and Dr. Matthew White Perry.

The District of Columbia Society for the Prevention of Blindness is sponsoring a **Vision Testing Institute** on four consecutive Thursdays in January, beginning January 6, from 4 to 6 p.m. The lectures are open to the public and will be held in the auditorium of the National Museum, Constitution Avenue at 10th Street, N.W. The course is planned especially for nurses, teachers, parents, and medical social workers.

Chairman of the Institute is Dr. Inez E. Wilber, Vice President of the Society, who will preside at the first meeting, January 6. Four members of the District Medical Society will assist in this program. Subjects and speakers are: "Structure and Function of the Eye," Dr. Noel Stow; "Eye Muscles; Strabismus or Cross-eye," Dr. Frank D. Costenbader; "Eye Diseases in Children and How to Prevent Eye Defects," Dr. James N. Greear, Jr.; and "Refraction and Glasses," Dr. J. Thomas Schnebly.

On January 13, Mrs. Winifred Hathaway, Associate Director of the National Society for the Prevention of Blindness, will describe good eye habits and call attention to special educational facilities available for partially-sighted children.

Miss Helen Weaver, Consultant for Nursing Activities of the National Society, will discuss special problems in testing the vision of the preschool child and, together with Mrs. Rosalie F. Sauber, of the Maryland Society for the Prevention of Blindness, will demonstrate vision testing by the Snellen Chart and the Massachusetts Vision Kit.

The demonstration of vision testing will be repeated at the final lecture, January 27. At that time representatives from various health and welfare agencies and service clubs will discuss resources for eye care.

The Montgomery County Medical Society will meet January 18 at the Manor Country Club, Norbeck, Md. Following dinner at 7:15 p.m., Dr. T. Wiley Hodges, Consultant in Orthopedic Surgery to the U. S. Naval Medical Center, will give the principal address on "The Bone Graft in Reconstructive Surgery." Discussion of this subject by Drs. Custis Lee Hall and Allen S. Lloyd will follow the presentation by Dr. Hodges.

The Board of Trustees of the **U. S. Pharmacopoeial Convention** announces that they have selected as permanent U. S. P. Headquarters the building located at 46 Park Avenue, New York City. At a suitable time it will be dedicated for use as the Headquarters and Administration Offices of the Pharmacopoeia of the United States. The new offices will be within walking distance of Grand Central Station, the Pennsylvania Railroad Station, and the Air Lines Terminal on 42nd Street.

The Second Sheet Supplement to the U. S. P. XIII is available for all owners of Pharmacopoeias. Requests should be sent to Adley B. Nichols, Secretary, 4738 Kingessing Avenue, Philadelphia 43, Pa.

"Make Your Movies Talk," a booklet which describes how to prepare your film before sending it to a recording studio to have it converted from a silent to a sound version, has just been published by a motion picture producer.

The booklet furnishes simplified footage scale charts, lay-out for the preparation of script, and other important information. All 16 mm. film, whether photographed at 8, 16, 24 or 64 frames per second, is adaptable to sound. After the film, whether black and white or color, is prepared, a high fidelity sound track can be placed on the film by this producer for a very nominal fee. The booklet may be obtained free of charge from C. Lawrence Walsh and Company, 801 Brighton Road, Pittsburgh 12, Pa.

The **Executive Board,** at its meeting, November 1, voted in favor of the following recommendations of the Cancer Control Committee:

1. That the Tumor Clinic at Children's Hospital be endorsed provided it meets the standards established by the American College of Surgeons.
2. That approval be given to the grants made by the District of Columbia Division of the American Cancer Society to the Instructive Visiting Nurse Society, the Washington Home for Incurables, and to the Warwick Memorial Clinic for Cancer and Allied Diseases, the last for cancer research in the amount of $20,000.
3. That contributions accepted by cancer detection clinics for reëxamination of patients be increased from $5 to $10.
4. That legislation be enacted which would make cancer a reportable disease in the District of Columbia.

Dr. G. Victor Simpson was appointed Chairman of the Committee on Ophthalmology, succeeding Dr. Richard W. Wilkinson, who resigned.

Drs. R. T. Sullivan and J. Ross Veal were reappointed delegates to the Federation of Citizens' Associations.

The Section on Otolaryngology held its first fall meeting, October 19, at the Army-Navy Town Club. Drs. Earle G. Breeding, George B. Trible and Don S. Knowlton presented "Recent Developments in Otolaryngology—a Report from the Academy."

The Section on Radiology will hold a joint meeting with the Section on Radiology of the Baltimore City Medical Society, January 20, at 8 p.m., in the Medical Society's auditorium.

The Section on General Practice met in the Society's building, November 23. Dr. A. Magruder MacDonald discussed "Case Reports from the Coroner's Office" and Dr. Oscar B. Hunter presented "Basic Facts in Hematology."

The Section on Neurology and Psychiatry held a Symposium on the Teaching of Undergraduate Psychiatry in the Medical Society's auditorium, December 2. Dr. Harvey Tompkins was Moderator. Participating in the symposium were Drs. Walter Freeman, Winfred Overholser, George N. Raines and Florence Powdermaker.

St. Elizabeths Hospital Medical Society held its annual meeting, November 20, in Hitchcock Hall. The following papers were presented during the morning: "Aggression," Dr. Benjamin Karpman; "Newer Technics in Psychosurgery," Dr. James P. Murphy; "The Psychiatrist as Court Consultant," Dr. Genevieve M. Stewart, Philadelphia; "Carbonic Anhydrase in Newborn Infants," Dr. Winifred Ashby.

In the afternoon session Dr. Arcangelo D'Amore gave a paper dealing with schizophrenic patients; Dr. Milton M. Parker, of Columbus, Ohio, spoke on electric shock treatment; and Dr. F. Regis Riesenman discussed Parkinsonism following heat stroke. Dr. Winfred Overholser, Superintendent of St. Elizabeths, closed the meeting with a report on the recent International Congress on Mental Health, which he attended.

The George Washington University Medical Society devoted its second meeting of the season, November 20, to the subject of malignancy. The guest speaker was Dr. Louis Krause, Associate Professor of Medicine of the University of Maryland.

The Washington Psychoanalytic Society met in the Medical Society's building, November 13. Dr. Alfred H. Stanton presented a paper, written in collaboration with Dr. Morris S. Schwartz, entitled, "The Management of a Type of Institutional Participation in Mental Illness."

The Washington Ophthalmological Society held a joint dinner meeting with the Baltimore Ophthalmological Society, November 1, at the Kennedy-Warren Hotel. Dr. Frederick W. Stocker, of Durham, North Carolina, was guest speaker; his subject, "Management of Primary Glaucoma."

The Clinico-Pathological Society met November 16 at the home of Dr. Thomas Bradley. Two case reports were presented by members: "Rheumatic Fever" by Dr. Edward B. Broocks and "Lipoid Pneumonia" by Dr. Aubrey O. Hampton.

Dr. Custis Lee Hall took office as President of the **United States Chapter of the International College of Surgeons** during its 13th Annual Assembly and Convocation in St. Louis, November 15–20.

Dr. Hall has distinguished himself in the field of orthopedic surgery. He is Clinical Professor of Surgery at George Washington University School of Medicine, his alma mater. He is Chief of Orthopedics at Doctors Hospital, on the staff of Garfield and Children's Hospitals as orthopedic surgeon, and consultant in orthopedic surgery to Mt. Alto Veterans Hospital. During the First World War he served with the British and American Expeditionary forces as Major in the Medical Corps of the U. S. Army. He is a diplomate of the American Board of Orthopedic Surgery, a Fellow of the American College of Surgeons, and a member of many other scientific organizations.

The I. C. S. conferred honorary fellowship upon Rear Admiral Clifford Swanson, Surgeon General of the Navy. The following Washington physicians were elected to fellowship: Drs. Catherine Birch, John F. Brownsberger, Wendell A. Parker, Everett J. Gordon, and Harry S. Weitzman.

Drs. Claude W. Mitchell and Theodore R. Coleman were admitted to associate membership.

The Eighth Annual Conference of the Maryland-District of Columbia Hospital Association was held at the Hotel Statler, November 8–9. Benjamin W. Wright, Superintendent of Memorial Hospital, Cumberland, Md., was installed as President, succeeding James G. Capossela, Administrator of Emergency Hospital. The new President-elect is Leo G. Schmelzer, Superintendent of George Washington University Hospital.

A new **Tumor Board** has been established at **Children's Hospital** which will seek to educate physicians, teachers, parents, and others concerning the existence of children's tumors, the need for prompt treatment, and the standardization of procedures. Comprising the Board are: Dr. W. Warren Sager, *Chairman*, representing surgery; Dr. William F. Burdick, representing pediatrics; Dr. E. Clarence Rice, representing pathology; Dr. Isidore Lattman, for X-ray; and Dr. D. Joseph Judge, *Secretary*. Dr. Judge is resident in pathology at the Hospital.

The Board will gather statistics on malignant growths in children, conduct follow-up studies on patients treated, and expedite early diagnosis and treatment of malignancy.

A group of 30 women volunteer workers, all members of the National Council of Jewish Women, presented **Warwick Memorial Clinic** with a check for $1,917 to be used for training special laboratory technicians for the Clinic. Dr. Calvin T. Klopp, Director of the Clinic, said the funds will defray the expenses of technicians who will be sent to the Public Health Service school at Hot Springs, Arkansas, for a course in the study of cancer cells. The money was raised by personal solicitation by members of the group.

A grant of $4,025 for **Children's Hospital** was recently approved by the Surgeon General of Public Health Service, Dr. Leonard A. Scheele. The funds will be used for clinical investigation of rheumatic fever, a project already under way at this institution under the direction of Dr. Mark P. Schultz.

At the closing session of the 34th Convocation of the **American College of Surgeons,** held in Los Angeles, October 22, 943 fellowships and seven honorary fellowships were conferred. Among those who received honorary fellowships were Major General Raymond W. Bliss, Surgeon General of the U. S. Army; Dr. Leonard A. Scheele, Surgeon General of the U. S. Public Health Service; and Rear Admiral Clifford A. Swanson, Surgeon General of the U. S. Navy.

From Washington the following list of initiates were received into fellowship: Drs. John H. Bayly, Claude C. Blackwell, James W. Braden, C. Willard Camalier, Jr., J. Roscoe Creer, Leslie V. Dill, Wendell A. Parker, Rufus M. Roll, Walter J. Romejko and Joseph B. Sheffery.

Dr. John McMichael, of London, delivered the first **William C. Borden Lecture** since the War, November 15, at the George Washington University School of Medicine. His address was entitled, "Some Peripheral Vascular Reactions of Surgical Interest." Dr. McMichael is Professor of Medicine at the University of London and a medical pioneer in the diagnosis of different types of heart failure. He is also Professor of Medicine at the British Postgraduate Medical School and Chief of Medicine at the Hammersmith Hospital in London.

The lectures are made possible by a fund established by the Borden family in memory of the late Dr. William C. Borden, formerly Dean of George Washington University School of Medicine and recognized as one of those most responsible for the founding of Walter Reed General Hospital.

Dr. F. D. Costenbader attended the meetings of the American Academy of Otolaryngology and Ophthalmology, in Chicago, October 10–15. He was reëlected Secretary-Treasurer of the American Orthoptic Council, which met conjointly with the Academy. **Miss Dorothy Bair,** technician to Dr. Costenbader, was elected to the Orthoptic Council. For the past two years Miss Bair has been President of the Certified Orthoptic Technicians.

Dr. Costenbader also attended the meetings of the Southern Medical Association in Miami, October 25–28, and delivered a paper on "Concomitant Convergent Strabismus" before one of the scientific sections.

Dr. Thomas M. Brown, Professor of Medicine of George Washington University School of Medicine, accepted an invitation to serve as Visiting Chief of the Medical Service in Ventnor Clinic, Atlantic City, N. J., from November 15 to 20. Dr. Brown was in complete charge of the Medical Service during his visit.

Since there is no medical school in Atlantic City, the Ventnor Clinic has had difficulty training interns and residents and maintaining the continuing education of practicing physicians. The Clinic has been conducting an experiment in this type of education for the past 18 months, and since May the program has included a visiting physician in medicine and/or surgery.

Dr. Walter A. Bloedorn, retiring President of the Association of American Medical Colleges, delivered his Presidential Address before the 59th Annual Meeting of the Association in White Sulphur Springs, West Virginia, November 8.

Dr. Kenneth R. Nelson has succeeded Dr. John B. Ross, who resigned, as Physician-in-Charge and Technical Director of the Red Cross Washington Regional Blood Center. Dr. Nelson, a graduate of Rush Medical College, studied at the Army Medical Center in Washington in 1937, returning here for more advanced work in all departments of clinical pathology in 1939. He was Chief of Laboratory Service in the North Sector General Hospital, Island of Oahu, Hawaii, when the Japanese attacked in 1941. He served on the Island until 1943 and then entered private practice in the Pacific Northwest states.

Theodore Wiprud was one of the speakers at the first National Medical Public Relations Conference, sponsored by the American Medical Asociation, in St. Louis, November 27. His paper on "Handling Emergency and Night Calls" was one of six presented during a Problem Clinic. Other speakers at the Clinic were Lester H. Perry, Executive Secretary of the Medical Society of the State of Pennsylvania; Dr. Charles G. Hayden, Medical Director of the Massachusetts Medical Service; Clem Whitaker, Public Relations Counsel to the California Medical Association; C. H. Crownhart, Secretary of the State Medical Society of Wisconsin; and Henry S. Johnson, Director of Public Relations and Medical Service of the Medical Society of Virginia.

Dr. A Barklie Coulter was elected President of the Metropolitan Washington Tuberculosis Conference at a general meeting at Glenn Dale Sanatorium, October 29. Dr. Coulter, who is Director of the District Bureau for Tuberculosis, succeeds Dr. V. L. Ellicott, Health Officer for Montgomery County, Maryland. The Conference first convened in October 1945 and has met semi-annually since then.

Dr. Coulter addressed members of the Civitan Club, November 16, at a luncheon meeting at the Mayflower Hotel.

Dr. J. Winthrop Peabody, Professor of Diseases of the Respiratory System, Georgetown University School of Medicine, led a luncheon round table discussion on "The Use and Abuse of Bed Rest," November 8, during the Postgraduate Course in Diseases of the Chest, sponsored by the Council on Postgraduate Medical Education and the New York State Chapter of the American College of Chest Physicians.

Dr. James Q. Gant, Jr. was elected President of the Association of Reserve Officers of the U. S. Public Health Service at a meeting in Boston, November 8, and took office on the same date. The meeting was held in conjunction with the annual meeting of the American Public Health Association.

Dr. Leon Gerber read a paper on "Lumbar Sympathectomy in Peripheral Arteriosclerosis with Gangrene" before the American Society for the Study of Arteriosclerosis, which met in Chicago, November 1. The paper was prepared jointly with Dr. William S. McCune and Dr. William Eastman, who is resident physician at Gallinger Municipal Hospital.

Dr. Edward B. Tuohy participated in an Open Forum during the joint meeting of the American Society of Anesthesiologists, Inc. with the Philadelphia Society of Anesthesiologists in Philadelphia, October 7–9. Dr. Tuohy was moderator for a portion of the Forum devoted to "Provision of Personnel for Anesthesiology."

Dr. S. Ross Taggart, Director of the District Bureau of Venereal Diseases, discussed blood tests for syphilis at the luncheon meeting of the Public Health Committee of the Washington Board of Trade, November 5, at the Burlington Hotel. Present as guests of the Committee were Mr. Preston R. Fish, Program Director of the District Bureau of Venereal Diseases; Dr. R. Lomax Wells, Medical Director of the Chesapeake and Potomac Telephone Company; and Mr. Ray H. Everett, Executive Secretary of the Social Hygiene Society.

Dr. W. E. Torrey, Jr. has received an appointment as Obstetrical and Gynecological Resident at the Philadelphia Lying-in Hospital. Dr. Torrey has transferred his membership from Active to Associate during his specialty training in Philadelphia.

Dr. Charles S. White addressed the Northern Neck Medical Society of Virginia, at Tides Inn, Irvington, Va., October 28, on the subject of "Carcinoma of the Colon from the General Practitioners' Standpoint."

Dr. Robert J. Coffey participated in a round table discussion on "The Hospital Team and Public Relations," November 18, during the 45th Annual Meeting of the Graduate Nurses' Association and the League of Nursing Education of the District of Columbia, November 12–18.

Dr. Arthur C. Christie was guest speaker at the regular monthly meeting of the Medico-Chirurgical Society of the District of Columbia, October 28. The subject of his talk was "Rectal Bleeding: Its Diagnosis and Treatment."

Theodore Wiprud, Secretary of the Board of Trustees of Medical Service of the District of Columbia, and **F. P. Rawlings, Jr.,** Director of Group Hospitalization, Inc., attended the Annual Conference of Blue Cross-Blue Shield Plans held at French Lick Springs, Indiana, October 25–28.

Dr. Maurice H. Friedman addressed the Fourth National Conference of County Medical Society Officers, November 30, at the Jefferson Hotel in St. Louis. His subject was "The Public, the Doctor, and 'Socialized Medicine'."

Dr. Joseph S. Lawrence was the luncheon speaker at the Middle Atlantic States Regional Conference in Philadelphia, November 18. Dr. Lawrence, who is Director of the Washington office of the AMA, gave a talk entitled, "Washington Horoscope."

Dr. Maurice Herzmark has been elected President of the Washington Chapter of the Friends of the Hebrew University in Jerusalem. **Dr. Samuel Dodek** was elected Vice President.

Dr. Dorothy Donley-Dowd has resigned as Director of the Child Center and as a member of the faculty of Catholic University, effective November 15. She is making plans to enter private practice.

Dr. Dexter M. Bullard, Director of the Chestnut Lodge Sanitorium, addressed the Woman's Club of Kensington at its meeting, November 5. His subject was "The Aspects of Mental Hygiene."

Dr. Raymond T. Holden has been appointed a member of the Healing Arts Advisory Committee to the National Headquarters of Selective Service.

Dr. Eugene deSavitsch has been elected President of the Russian Orthodox-Greek Catholic Church of St. Nicholas.

Dr. Roy Lyman Sexton addressed the luncheon meeting of the Almas Temple, November 19. His subject was "Man Does Not Die; He Kills Himself."

Dr. Catharine G. Knop attended the meetings of the American Academy of Pediatrics in Atlantic City, November 20–23.

Dr. Benjamin Karpman discussed the Kinsey Report at a meeting of the men's club of Adas Israel congregation, November 16.

Dr. Riley H. Guthrie, formerly of Washington, has been appointed special mental hospital consultant, according to an announcement by the Mental Hygiene Division of the Public Health Service. As of November 1, Dr. Guthrie will be available to conduct surveys of mental hospitals and provide consultative services regarding hospital administration, care of patients, and other problems of mental institutions.

Dr. Guthrie has been associated with state mental hospitals for 20 years. For the past three and one-half years he was Superintendent of the Norwich State Hospital at Norwich, Conn. He previously served on the staff of St. Elizabeths Hospital as First Assistant Physician, a position he held for six years.

The body of **Captain Albert M. Wheeler, M.C., A.U.S.,** who died in France, August 11, 1945, just before the end of the War, was returned to the United States aboard the U. S. Transport Carroll Victory. Private burial services were held, November 4, in Greenwood Cemetery, Wheeling, West Virginia, his native city. Dr. Wheeler was an Active member of the District Medical Society prior to entering service in April, 1941, having been engaged in active practice in the District of Columbia for nine years.

CORRESPONDENCE

Washington, D. C., September 17, 1948

Mr. E. E. Hearn
Internal Revenue Agent
10 Light Street
Baltimore, Maryland

Dear Mr. Hearn:

We have had calls from several physicians informing us that your office, through its agents, has advised them that deductions for entertainment expenses incidental to the conduct of their profession will henceforth be disallowed.

We are writing you to ascertain whether this is a blanket rule, with no exception, regardless of circumstances. A letter from you in regard to this matter will be very much appreciated.

Sincerely yours,
Theodore Wiprud
Secretary, The Medical Society of the District of Columbia

Baltimore, Md., September 22, 1948

Mr. Theodore Wiprud
Secretary, The Medical Society of the District of Columbia
1718 M Street, N.W.
Washington 6, D. C.

My dear Mr. Wiprud:

Receipt is acknowledged of your letter of September 17, 1948, in which you state that several physicians have informed you that this office, through its agents, had advised them that deductions for entertainment expenses incidental to the conduct of their profession would henceforth be disallowed. You requested advice as to whether this was a blanket rule, with no exceptions regardless of circumstances.

In this connection, the statute provides that all necessary and ordinary expenses paid or incurred during a taxable year in carrying on any trade or business are deductible in determining taxable income. The statute further provides with respect to non-trade or non-business expenses that, in the case of an individual, an ordinary and necessary expense paid or incurred during a taxable year in the production of income or its preservation, etc., shall be allowed in determining taxable income.

The examining officers of this division most certainly have not been given any such instructions as indicated in your letter by this office. On the contrary, each taxpayer's liability is determined on its own merits in strict observance of the law and regulations applicable in each individual case. It may be stated that expenses of the type under discussion will be subject to close scrutiny. However, if such expenses meet the requirements of the law and regulations and have a direct relation to the production of income, and can be supported by the taxpayer, they will be taken into consideration in determining his net taxable income.

Very truly yours,
J. C. Wilmer
Internal Revenue Agent in Charge,
Baltimore Division,
Treasury Department

MEETINGS

Wednesday, December 22

Business Meeting

Wednesday, January 12

Children's Hospital Night

Joseph S. Wall, M.D., *Presiding*

The following papers will be presented:

"Tumors in Childhood," W. Warren Sager M.D., Attending Surgeon, Children's Hospital. The material for this paper is taken from a report of the Tumor Board of Children's Hospital, whose members are: Dr. W. Warren Sager, *Chairman;* Drs. E. Clarence Rice, William F. Burdick, Isidore Lattman, and D. Joseph Judge, *Secretary.*

"Reduction of Intussusception with Contrast Media," Gerald H. McAteer, M.D., Associate Attending in Surgery, Children's Hospital.

"Clinical Evaluation of Aureomycin," Frederic J. Burke, M.D., Director of Pediatric Instruction, and Sydney Ross, M.D., Associate Attending in Medicine, Children's Hospital. This paper is based on a report of the Antibiotic Research Committee of the Hospital, whose members are: Dr. E. Clarence Rice, *Chairman;* Drs. Frederic G. Burke, Sydney Ross and John A. Washington.

Wednesday, January 26

Panel Discussion on Gastrointestinal Cancer

Harry H. Kerr, M.D., *Moderator*

The following aspects of this subject will be considered:

Clinical—Peter D. Comanduras, M.D., Assistant Professor of Clinical Medicine, George Washington University School of Medicine

Radiological—Aubrey O. Hampton, M.D., Radiologist, Groover, Christie and Merritt

Surgical—Robert J. Coffey, M.D., Professor of Surgery, Georgetown University School of Medicine

Pathological—Charles F. Geschickter, M.D., Professor of Pathology, Georgetown University School of Medicine

BOOK REVIEW

Modern Pattern for Marriage. Walter R. Stokes, LL.B., M.D. Price, $2.25. Pp. 143. New York: Rinehart, 1948.

This little book, written by a member of our Society, and one who has devoted his life to helping men and women solve their marital problems, gives constructive advice to couples contemplating marriage and to those who have embarked upon that natural but often hazardous relationship. In the words of another member of our Society, Dr. Winfred Overholser: "I am enthusiastic about it. It has a fine approach, is well arranged, and gives the needed facts. It will fill a real need." This reviewer can heartily endorse this statement.

The book may offend Catholic readers in that the author is an exponent of planned parenthood. In spite of this, even Catholic readers will find much of benefit in its pages. Some may object to the statement that "masturbation, as a means of relieving tension, may have a desirable place in the sexual life following marriage" as opposed to self-imposed celibacy. That, however, is a point of view that can be varied by individual concepts when abstinence is necessary for one reason or another.

The author has presented a pattern which, except for these controversial aspects, will guide married partners to a happy conjugal life and in turn help them to prepare their children for a similar state. In an appendix the author has listed with summaries the books which he believes will give additional help in this direction. That happy marriage requires social maturity and reciprocal adjustment is well developed in the pages of the text. It is easy to see how the author has been so successful in the development of his specialty, in which he is a pioneer.

W. M. Y.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have been received for review:

Your Baby: The Complete Baby Book for Mothers and Fathers. Gladys Denny Shultz, Contributing Editor, *Ladies' Home Journal*, and Lee Forrest Hill, M.D., Former President, American Academy of Pediatrics. Photography by Joseph Di Pietro; line drawings by Reisie Lonette. Price, $3.50. Pp. 278. New York: Doubleday, 1948.

The Case Against Socialized Medicine—a Constructive Analysis of the Attempt to Collectivize American Medicine. Lawrence Sullivan. Price, $1.50. Pp. 53. Washington: Statesman Press, National Press Building, 1948.

Physician's Handbook. John Warkentin, Ph.D., M.D., and Jack D. Lange, M.S., M.D. Price, $2.00. Pp. 293. Palo Alto, Calif: University Medical Publishers, Post Office Box No. 761, 1948.

Acknowledgment is also made of the following reference books:

Collected Reprints of the Grantees of the National Foundation for Infantile Paralysis for 1947, Volume VIII. New York: National Foundation for Infantile Paralysis, 120 Broadway, 1948.

Index-Catalogue of the Library of the Surgeon General's Office, United States Army (Army Medical Library). Fourth Series, Volume X, M-MEZ. Washington: Government Printing Office, 1948.

MEMBERSHIP

The following applicants for membership will be voted on at the meeting of the Executive Board, January 24, 1949:

For Active Membership

Seymour Alpert, Long Island College of Medicine—1943
Frank S. Ashburn, University of Texas—1938
Henry Richard Lyons, Georgetown University—1945
Benjamin F. Miller, Harvard University—1933
Kenneth Rider Nelson, Rush Medical College—1934
George Neely Raines, Northwestern University—1930
Muriel Raum, George Washington University—1944
Earle B. Thompson, University of Pennsylvania—1945

For Associate Membership

William D. Aud, George Washington University—1935
Marcus H. Burton, D.D.S., Georgetown University—1933
Charles L. Mendel, George Washington University—1938

Recent changes in membership status:

Active to Associate

Joseph V. Casella
Edward M. Pickford
W. Edward Torrey, Jr.

Resigned
Active

Samuel P. Hicks
Thomas C. Worth

Associate

Clifton R. Wallace

REPRINTS RECEIVED

The following reprints have recently been received, for which due acknowledgment is made:

"Contributions of the UNRRA Sanitary Engineering Program to International Health." Frederick F. Aldridge. Public Health Reports, December 12, 1947.

"Relationship Between Per Capita Income and Mortality, in the Cities of 100,000 or More Population." Marion E. Altenderfer. Public Health Reports, November 28, 1947.

"The Evaluation of X-ray Diagnosis in Ophthalmology, Rhinology, and Otolaryngology." D. H. Anthony and D. F. Fisher. The Journal of the Tennessee State Medical Association, February 1948.

"The Purpose of State Medical Societies." Creighton Barker. Rocky Mountain Medical Journal, December 1947.

"Employment of Soluble Antigen in Screening Tests for Typhus Complement Fixation." T. O. Berge. Public Health Reports, April 23, 1948.

"Births, Infant Mortality and Maternal Mortality in the United States—1944." Nancy J. Brombacher. Public Health Reports, October 31, 1947.

"Transfer of Malarial Parasites Between Blood Films During Mass Staining Procedures." M. M. Brooke and A. W. Donaldson. Public Health Reports, July 30, 1948.

"Bactericidal Properties of Chloramines and Free Chlorine in Water." C. T. Butterfield. Public Health Reports, July 16, 1948.

"Control of Trichinosis; Report by the Committee on Public Health Relations, the New York Academy of Medicine." Public Health Reports, April 9, 1948.

"Poliomyelitis in the United States, England and Wales in 1947." C. C. Dauer, W. H. Bradley and A. H. Gale. Public Health Reports March 26, 1948.

"'Medical Care for the Individual' and 'The Issue of Compulsory Health Insurance.' A Review of the Report of the Brookings Institution." Michael M. Davis and Dewey Anderson. Washington: U. S. Government Printing Office, 1948.

"Nutrition Studies." Miriam G. Eads and Alla P. Meredith. Public Health Reports, June 11, 1948.

"Relation of Reported Cases of Typhus Fever to Location, Temperature, and Precipitation." C. R. Eskey and F. M. Hemphill. Public Health Reports, July 16, 1948.

"Studies on the Duration of Disabling Sickness. VII. Duration Table for Specific Causes of Disability Among Male Workers." W. M. Gafafer, Elizabeth S. Frasier and Rosedith Sitgreaves. Public Health Reports, July 9, 1948.

"Appearance of 'Minimus' Type Diphtheria in Utah." Ted W. Galbraith, R. S. Fraser and E. H. Bramhall. Public Health Reports, April 30, 1948.

"Studies of Acute Diarrheal Diseases. XXI. Salmonellosis in Florida." Mildred M. Galton and Albert V. Hardy. Public Health Reports, June 25, 1948.

"Salmonella Suipestifer Pyarthrosis of the Knee Joint." Everett J. Gordon and Nathan Shechter. The Journal of Bone and Joint Surgery, January 1948.

"Negro Mortality. III. Course of Mortality from Specific Causes, 1920–1944." Mary Gover. Public Health Reports, February 13, 1948.

"Artificial Insemination." John O. Haman. California Medicine, May 1948.

"Studies of the Acute Diarrheal Diseases. XX. Further Observations of Chemotherapy in Shigellosis; the Efficacy of Streptomycin and Sulfacarzole." Albert V. Hardy and Seymour P. Halbert. Public Health Reports, June 11, 1948.

"Studies of the Acute Diarrheal Diseases. XVIII. Epidemiology." Albert V. Hardy and James Watt. Public Health Reports, March 19, 1948.

"Floor Pad for Foot-Exercising." Maurice H. Herzmark. The Journal of Bone and Joint Surgery, October 1947.

"Action of Streptomycin in Experimental Infection with Q Fever." Robert J. Huebner, George A. Hottle and Eleanor B. Robinson. Public Health Reports, March 19, 1948.

"The Distribution of Endemic Typhus in Rats in Lavaca County, Texas." J. V. Irons, J. N. Murphy, Jr., and David E. Davis. Public Health Reports, May 21, 1948.

"Techniques in Evaluation of Rapid Antisyphilitic Therapy." Albert P. Iskrant, Richard W. Bowman and James F. Donohue. Public Health Reports, July 23, 1948.

"Diphtheria Epidemic in Utah in 1947." Alton A. Jenkins. Public Health Reports, April 30, 1948.

"Dental Effects of Community Waters Accidentally Fluorinated for 19 Years." Henry Klein. Public Health Reports, April 30, 1948.

"Objectives and Program of the Arkansas Cancer Detection Project." Allen N. Koplin. Public Health Reports, June 18, 1948.

"Epidemic Tinea Capitis: A Public Health Problem." Richard K. C. Lee. Public Health Reports, February 27, 1948.

"Role of the Dentist in Oral Cancer Detection." Ralph S. Lloyd. Public Health Reports, June 18, 1948.

"The Present Incidence and Survival Picture in Cancer and the Promise of Improved Prognosis." Eleanor J. Macdonald. Bulletin, American College of Surgeons, June 1948.

"The Present Incidence and Survival Picture in Cancer Among Females in Connecticut, 1935–1946." Eleanor J. Macdonald. Journal of the American Medical Women's Association, April 1948.

"The Importance of Coverage in DDT Residual House Spraying for the Control of *Anopheles Quadrimaculatus* Mosquitoes." R. C. McCauley, R. W. Fay and S. W. Simmons. Public Health Reports, March 26, 1948.

"Statistical Studies of Heart Diseases. I. Heart Diseases and Allied Causes of Death in Relation to Age Changes in the Population." I. M. Moriyama and Mary Gover. Public Health Reports, April 23, 1948.

"New Surgeon General Takes Office and Charts the Road Ahead in Public Health." Public Health Reports, April 9, 1948.

"Combined Typhus-Malaria Control Residual Spray Operations with Five Percent DDT Emulsion." H. P. Nicholson, T. B. Gaines, J. G. McWilliams and M. H. Vetter. Public Health Reports, July 30, 1948.

"Ultraviolet Blood Irradiation Treatment of Pelvic Cellulitis: Knott Method." R. C. Olney. The American Journal of Surgery, October 1947.

"Appraising Our Own Efforts." Julian P. Price. The Journal of the South Carolina Medical Association, November 1947.

"Program of the National Cancer Institute." Public Health Reports, April 16, 1948.

"Operation of the Public Health Service Malaria Control Program." Frank Tetzlaff. Public Health Reports, April 30, 1948.

"Two New Salmonella Types: *S. Hidalgo* and *S. Mission*." James Watt, Thelma M. DeCapito, P. R. Edwards and Alice B. Moran. Public Health Reports, February 13, 1948.

"Gabriel Fallopio." Walter A. Wells. Laryngoscope, January 1948.

"Antonio Valsalva—Pioneer in Applied Anatomy—1666–1723." Walter A. Wells. Laryngoscope, February 1948.

"Dr. Thomas Wharton, 1614–1673." Walter A. Wells. Laryngoscope, March 1948.

EDWARD RHODES STITT, M.D., F.A.C.P., F.A.C.S.

(1867–1948)

Rear Admiral Edward Rhodes Stitt, Navy Medical Corps, retired, former Surgeon General of the Navy, died November 13, 1948, at the Naval Medical Hospital, Bethesda, Md., where he had been a patient for more than a year. Admiral Stitt had served in the Naval Medical Corps for 42 years, and as Surgeon General of the Navy from 1920 to 1928. He was an authority on tropical medicine and the author of many textbooks on the subject. After his retirement in 1931, he continued research in this field.

Born in Charlotte, North Carolina, July 22, 1867, he was the son of William Edward and Mary Rhodes Stitt. He received the Bachelor of Arts degree from the University of South Carolina in 1885 and his doctor's degree from the University of Pennsylvania four years later.

In 1889 he was appointed Assistant Surgeon in the Navy, and was promoted to Surgeon in 1900. He became Medical Director, with the rank of Rear Admiral, on October 15, 1917. In 1920 he succeeded Admiral W. C. Braisted as Surgeon General of the Navy, which post he held until 1928.

Because of his interest in tropical diseases, the Navy sent him to the London School of Tropical Medicine in 1905; on his return, he was appointed to the Naval Medical School in Washington, where he taught until 1920. From 1916 to 1920 he was the commanding officer of the School, and during World War I, had charge of the laboratory services at various naval stations and hospitals.

At one time he was a Professor in Tropical Medicine at both George Washington and Georgetown Universities, and lectured on the subject at the Jefferson Medical College. He held honorary degrees from several universities, and since 1941 had been a consultant on tropical medicine to the Secretary of War.

Admiral Stitt was a member of the National Board of Medical Examiners from 1915 to 1929, and served as President of the Board from 1926 to 1928; he was President of the American Society of Tropical Medicine in 1912, and President of the American Association of Military Surgeons in 1925 and 1926. He was a Fellow of the American College of Surgeons, the American College of Physicians, and the American Medical Association, and a member of the Association of American Physicians, the Southern Medical Association, the Royal Society of Medicine, and many other fraternal and social organizations.

Admiral Stitt is survived by his wife, Mrs. Helen Newton Stitt, of 1625 R Street, N.W., and three children, Comdr. Edward W. Stitt, U.S.N.R., of Trenton, N. J.; Mrs. Warren Stephenson, of Washington; and Mrs. Herman Hudgins, of Norfolk, Va.

GEORGE C. BEACH, JR., M.D., F.A.C.P.

(1888–1948)

Major General George C. Beach, Jr., Commanding General of the Army Medical Center, died November 18, 1948, at Walter Reed General Hospital after a short illness. General Beach assumed command of the Center early in 1946, upon the release from active duty of Major General Shelley U. Marietta.

A native of Topeka, Kansas, General Beach was born on October 28, 1888, the son of George Corwin and Laura Rosseau Beach. He entered military service shortly after graduating from Kansas City University Medical College in 1911. He first served as Assistant Surgeon at Soldiers Home, Hampton, Va., until 1914, when he was appointed First Lieutenant in the Medical Corps of the United States Army. He was awarded the Distinguished

Service Medal for his services to his country during World War I.

He was promoted through the grades to Brigadier General in 1943, and to Major General after assuming command of the Army Medical Center, where he formerly served as Assistant Surgeon General.

General Beach was a diplomate of the American Board of Internal Medicine, a Fellow of the American College of Physicians and the American Medical Association, and a member of the Association of Military Surgeons.

Mrs. Jessie Spencer Beach, his wife, survives him.

Expectation from Psychiatry—Burlingame

(*Continued from page 660*)

Under all circumstances, the psychotherapist himself is his own best tool.

I hope that some recent publicity accidents, in which some psychiatrists have been cast in the role of warning the public against other psychiatrists with whom they differ, will not result in diminishing your confidence in the psychiatric profession as a whole. It is undignified and most unfortunate for the different schools to attack one another in an effort to preëmpt the field. So much of psychiatry is still on a hypothetical basis that all schools of thought are needed in the interest of scientific advancement. Out of honest differences of opinion comes progress, and we bespeak your tolerance for all psychotherapeutic schools while we advance in this most important department of our growth.

From what I have said, it is evident that I see two trends in psychiatry; one is away from medicine, and the other, which I hope is the enduring one, is more and more toward being an integral part of the medical profession, with a free exchange of knowledge between psychiatrists and other medical men.

We are a new specialty. We can be an important specialty and a popular one, but to my mind, the essential thing is not whether psychiatry is new and important, and popular, but whether or not we can walk side by side with you gentlemen of science as the years go by, being increasingly entitled to call ourselves a branch of scientific medicine.

We are not universal specialists—heaven forbid! We are doctors of medicine who realize that the body is the vehicle of the mind, and we are seeking a better knowledge of the human body because it is the vehicle of the mind. But this we cannot do alone. Every man of medicine must join us in his daily striving to treat the individual as well as the disease, in the full knowledge that man's emotions are the driving force that makes man man.

What Is a Neurosis—English

(*Continued from page 663*)

ciples have been inserted so that this important aspect of neurosis is not completely neglected.

Finally, it should be remembered that every individual neurosis which is properly understood and properly treated does something to put our whole society ahead to that day when our social sicknesses, as well as our individual sicknesses, will assume smaller proportion. In this way the physician has the satisfaction of treating two patients at once, the individual patient and that proud, capricious, and neurotic old being, society itself.

Adjustments to Age—Johnson

(*Continued from page 667*)

temporaries. Be hospitable to new ideas, and do not hesitate to discard old ones that are not worth keeping.

This advice may seem to be in conflict with Osler's "Way of Life," but actually it is not. Planning for tomorrow is often a part of today's work.

In conclusion, I would like to quote the final paragraph of my little book, "The Years After Fifty,"[2] since it summarizes better than I could do it again what I have been trying to say:

"The pathway of life is usually regarded as leading upward until middle age, then downhill for the last half of the way. This concept may hold good for the physical man, but is it necessary for the mind and the soul to traverse the same route as the body? Why should they not climb steadily upward to the end? Certainly the one who has attained success in his calling is respected and even honored by his associates far more after he is 50 than before. Why should not one reap, during old age, a bountiful harvest of good will and approbation and loving kindness from friends, relatives, associates, and neighbors? One who conducts himself as he should in the early years, makes the best of the opportunities that come to everyone, encourages his intellectual curiosity, disciplines his emotions, strives to develop a straight-thinking mind, keeps the temple of his body in good repair, and cultivates a tolerant spirit and a genuine love of humanity, can look forward with serenity to the last of life, for which the first was made."

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1. Benson, A. C.: On Growing Older, in From a College Window. New York: Putnam, 1906.
2. Johnson, W. M.: The Years After Fifty. New York: Whittlesey House, 1947.
3. Stieglitz, E. J.: Geriatric Medicine. Philadelphia: Saunders, 1942.
4. Osler, W.: A Way of Life. New York: Hoeber, 1940.

Washington Physicians of Yesterday—Franzoni

(*Continued from page 689*)

It is not without interest to note that Dr. Franzoni had a family connection with Z. D. Gilman's Drug Store, which has been continuously in active operation since 1822, and at its present location, 627 Pennsylvania Avenue, N.W. It is the oldest pharmacy in the city, and for over a century and a quarter has been an important purveyor of medical and surgical supplies for the physicians of Washington. In other cities ancient and long-lived pharmacies have been made historical shrines. Dr. Franzoni's brother, Joseph Dunbar Franzoni, at first a clerk in the store, became its manager in the 1870's, and later its proprietor, superseding the Gilman ownership although not the name. One of the latter's grandsons, F. Royce Franzoni, B.S. Phar., the present head of the firm, is an Associate member of the Medical Society; and another grandson is Dr. Joseph D. Franzoni (M.D.), a neuropsychiatrist in the Medical Department of the United States Army during the late War, now on the staff of Saint Elizabeths Hospital. An additional link with the Medical Society consisted in the fact that in 1865–66 the District Medical Society and Association held their meetings in the building then and still occupied by Gilman's Drug Store.

Dr. Franzoni died February 18, 1923, from pneumonia, after a short illness. "Much beloved" by his associates, the entire membership of the Medical Society were designated honorary pall bearers at the funeral.

John B. Nichols, M.D.

MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA

VOLUME XVII, 1948

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